



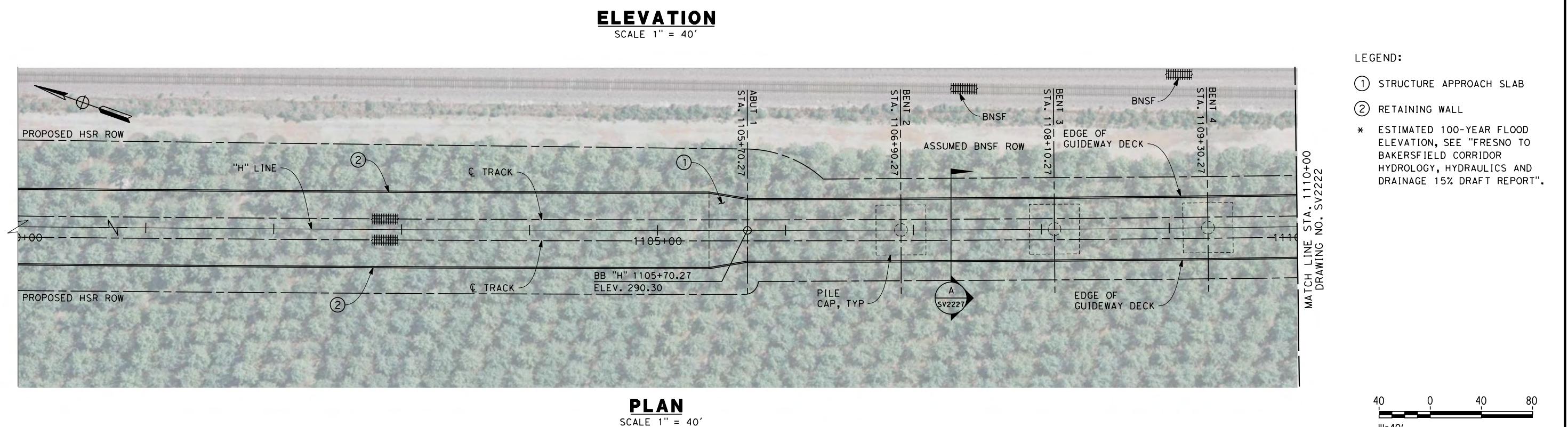
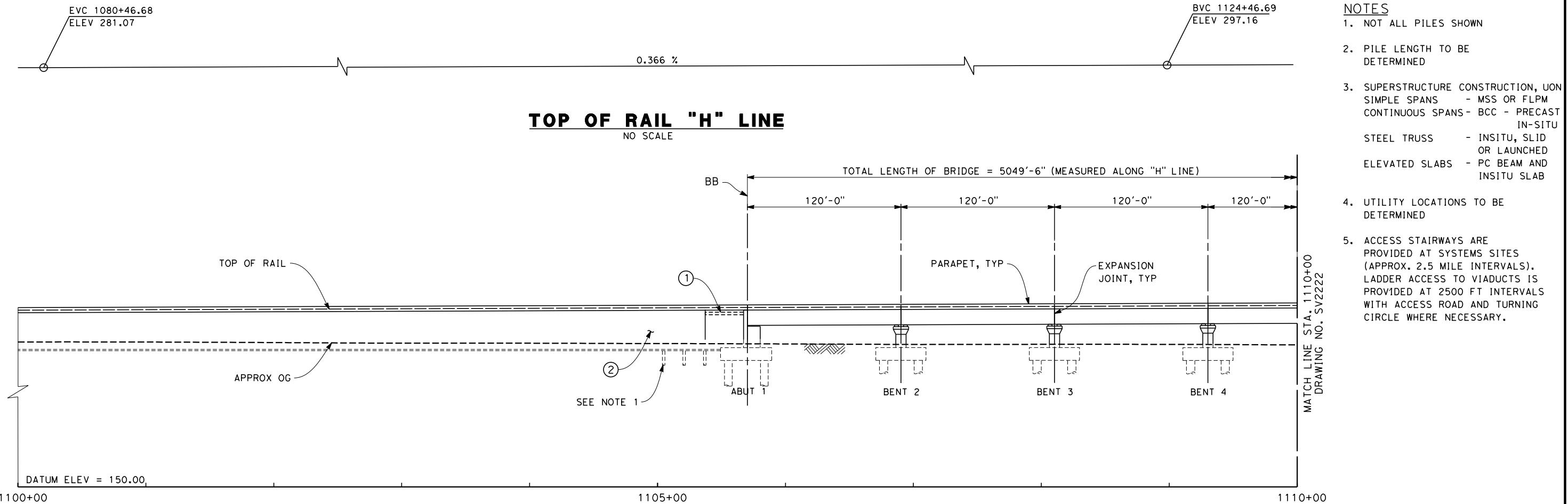
				DESIGNED BY M. FISHER
				DRAWN BY N. HUTTON
				CHECKED BY A. ARMSTRONG
				IN CHARGE R. COFFIN
				DATE 12/31/13
REV	DATE	BY	CHK	APP
				DESCRIPTION

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

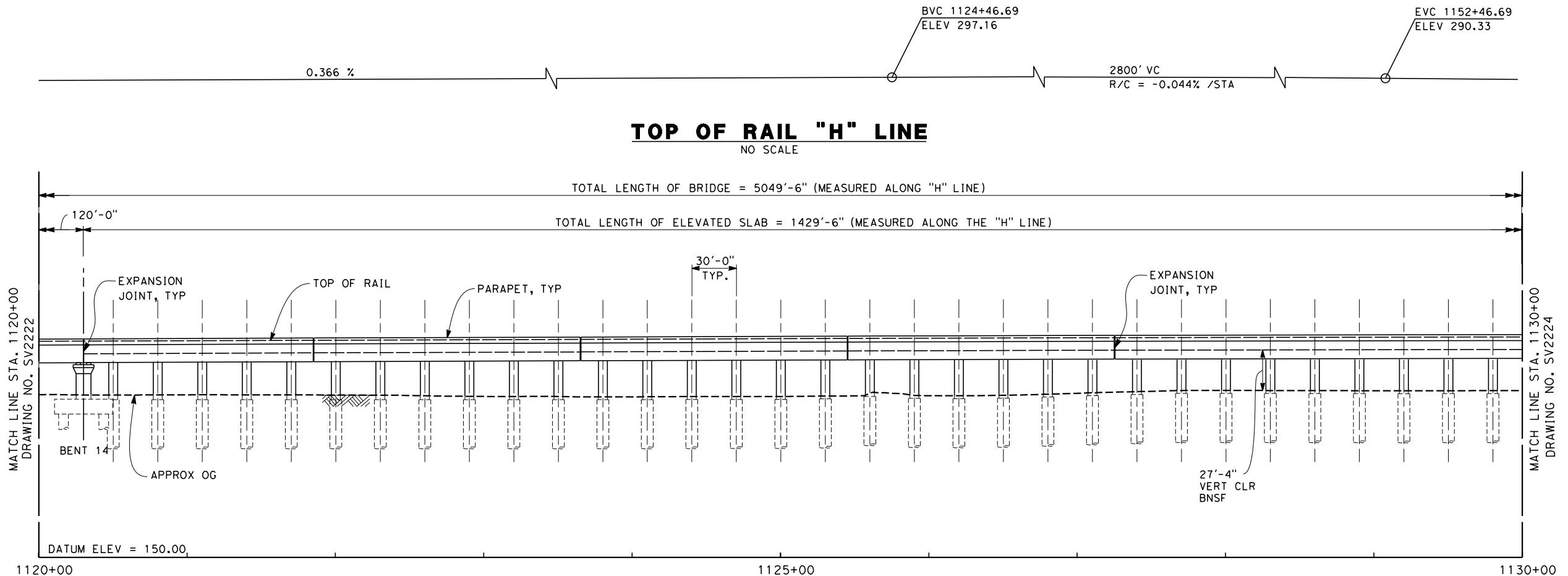


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
CONEJO VIADUCT  
KEY MAP

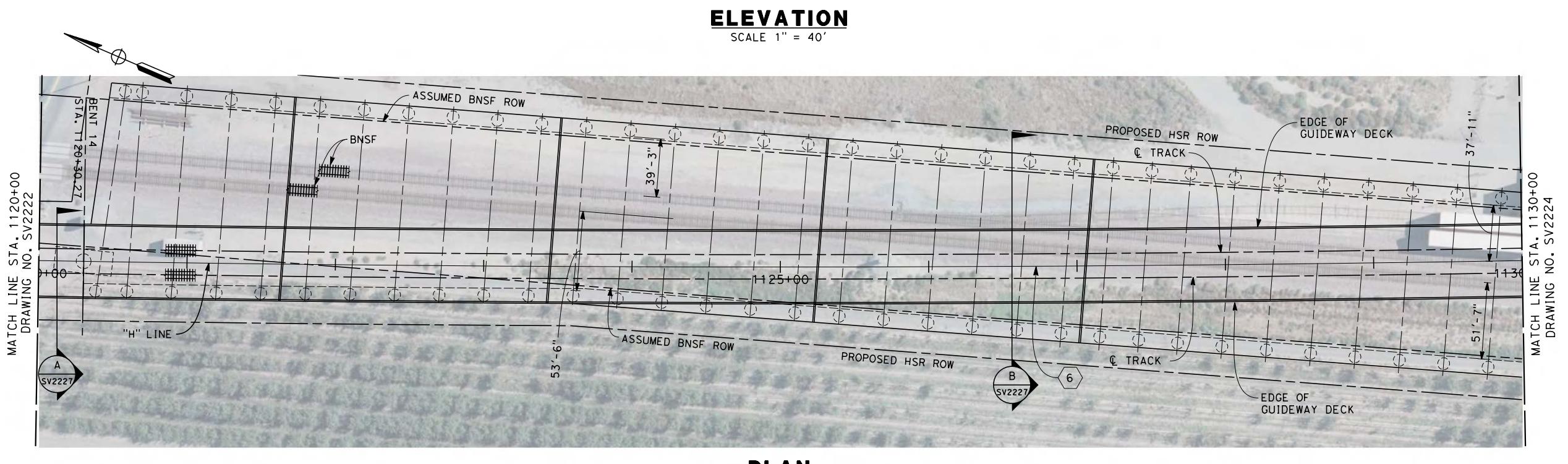
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2220  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 8







- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



40 0 40 80  
1"=40'

REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

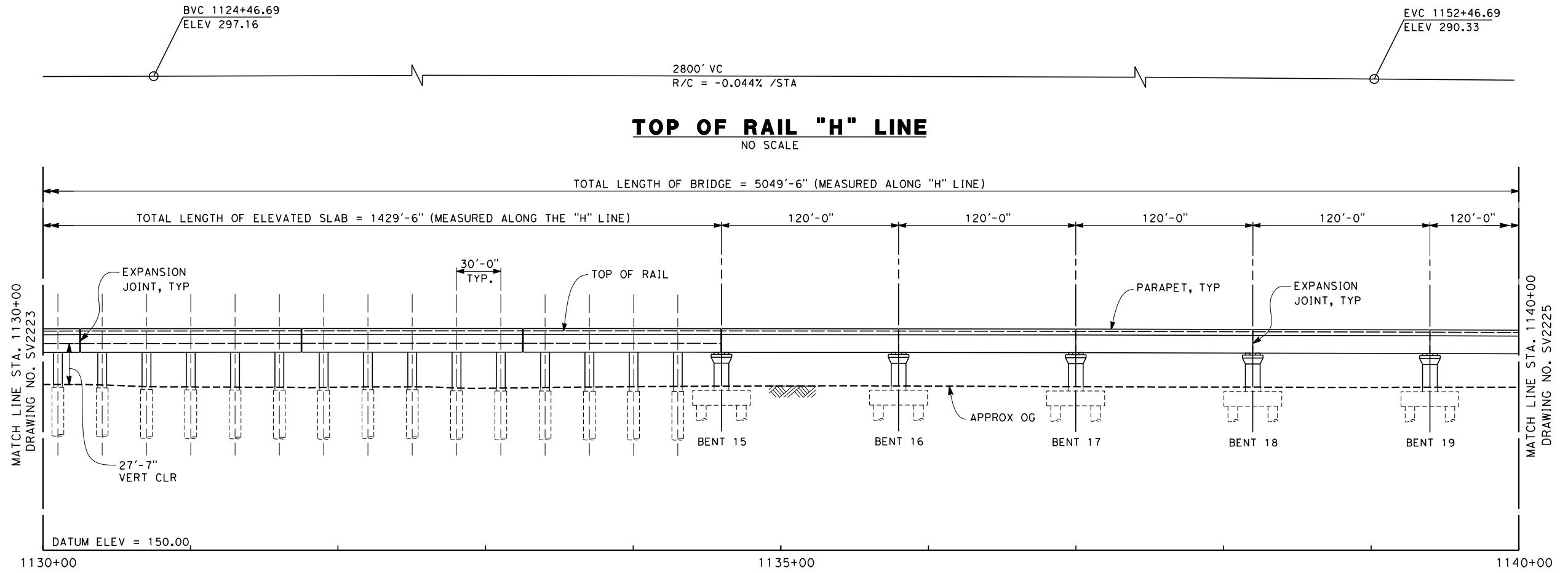
DESIGNED BY  
Y. REN  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
CONEJO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2223  
SCALE  
AS SHOWN  
SHEET NO.  
4 OF 8



NOTES

- . NOT ALL PILES SHOWN
- . PILE LENGTH TO BE DETERMINED
- . SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
- . UTILITY LOCATIONS TO BE DETERMINED
- . ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

## **OF RAIL "H" LINE**

NO SCALE

TOTAL LENGTH OF BRIDGE = 5049'-6" (MEASURED ALONG "H" LINE)

TOTAL LENGTH OF ELEVATED SLAB = 1429'-6" (MEASURED ALONG THE "H" LINE)

120'-0"

120'-0"

120'-0"

120'-0"

MATCH LINE STA. 1140+00  
DRAWING NO. SV2225

MATCH LINE SIA. 130+00  
DRAWING NO. SV2223

1130+00

1135+00

1140+00

## **ELEVATION**

SCALE 1" = 40'

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

#### CURVE DATA

8

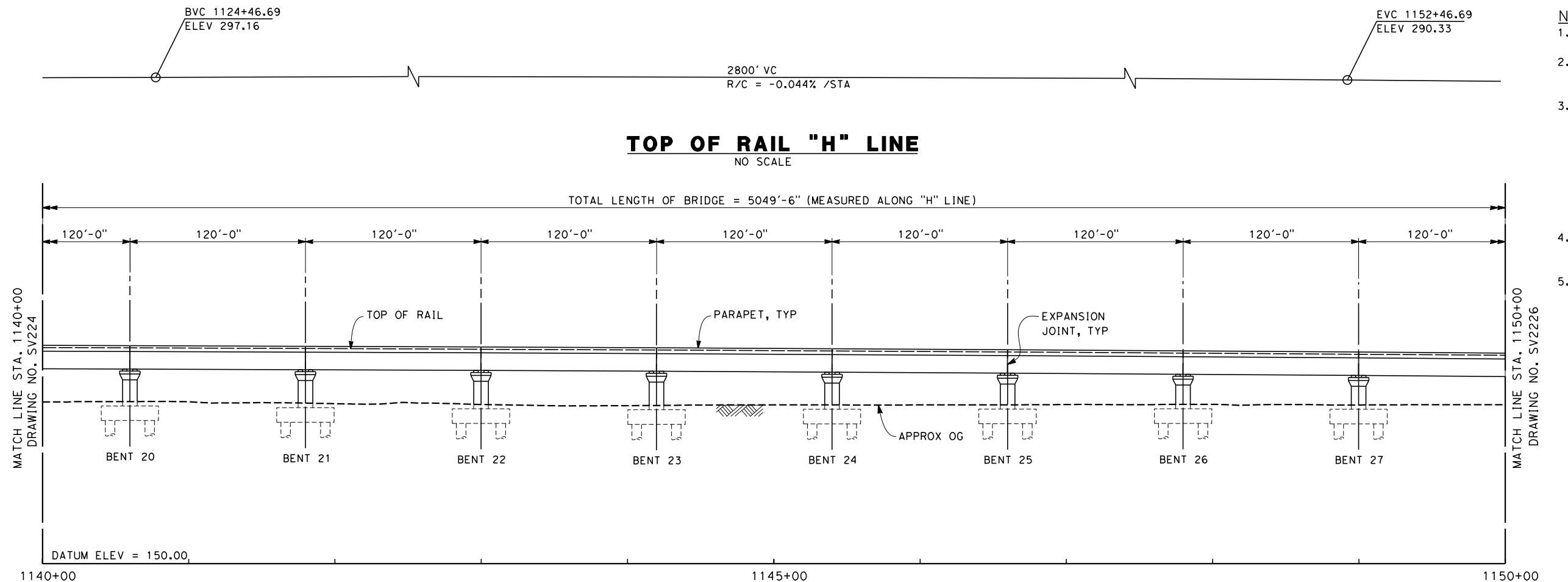
R = 29000.00'  
 $\Delta$  =  $37^\circ 42' 29.3''$   
 T = 9903.0'  
 I = 19085.8'



# CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION  
ALIGNMENT H  
CONEJO VIADUCT  
PLAN AND ELEVATION

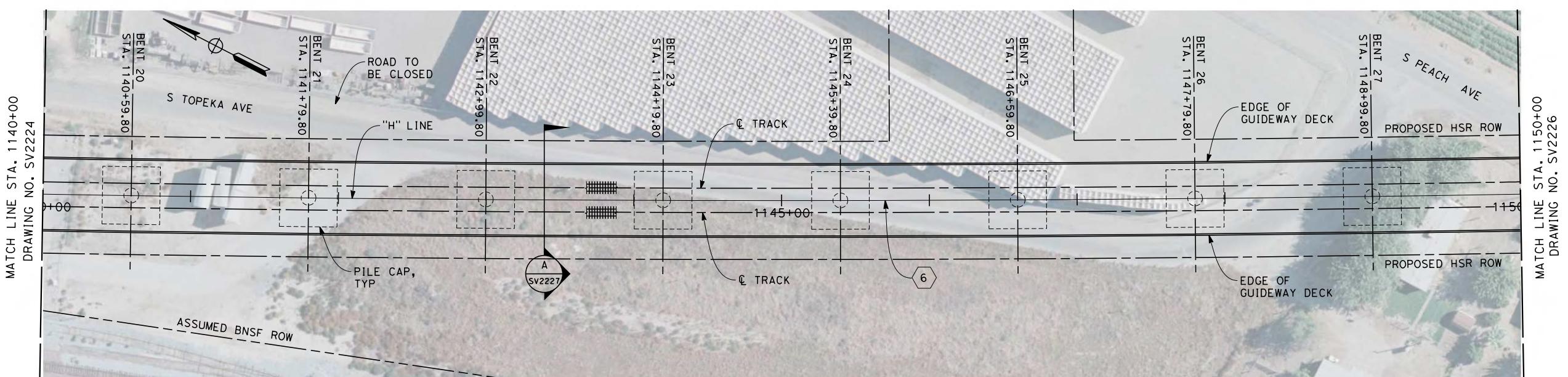
**CONTRACT NO.**  
HSR 06-0003  
**DRAWING NO.**  
SV2224  
**SCALE**  
AS SHOWN  
 **SHEET NO.**  
5 OF 8



- NOTES
- NOT ALL PILES SHOWN
- PILE LENGTH TO BE DETERMINED
- SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
- UTILITY LOCATIONS TO BE DETERMINED
- ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

## ELEVATION

SCALE 1" = 40'



LEGEND:

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL

\* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA  
  
R = 29000.00'  
 $\Delta$  =  $37^\circ 42' 29.3''$   
T = 9903.0'  
L = 19085.8'

A horizontal number line with tick marks at -40, 0, 40, and 80. The segment between 0 and 40 is shaded black. Below the line, the text "l'=40" is written.

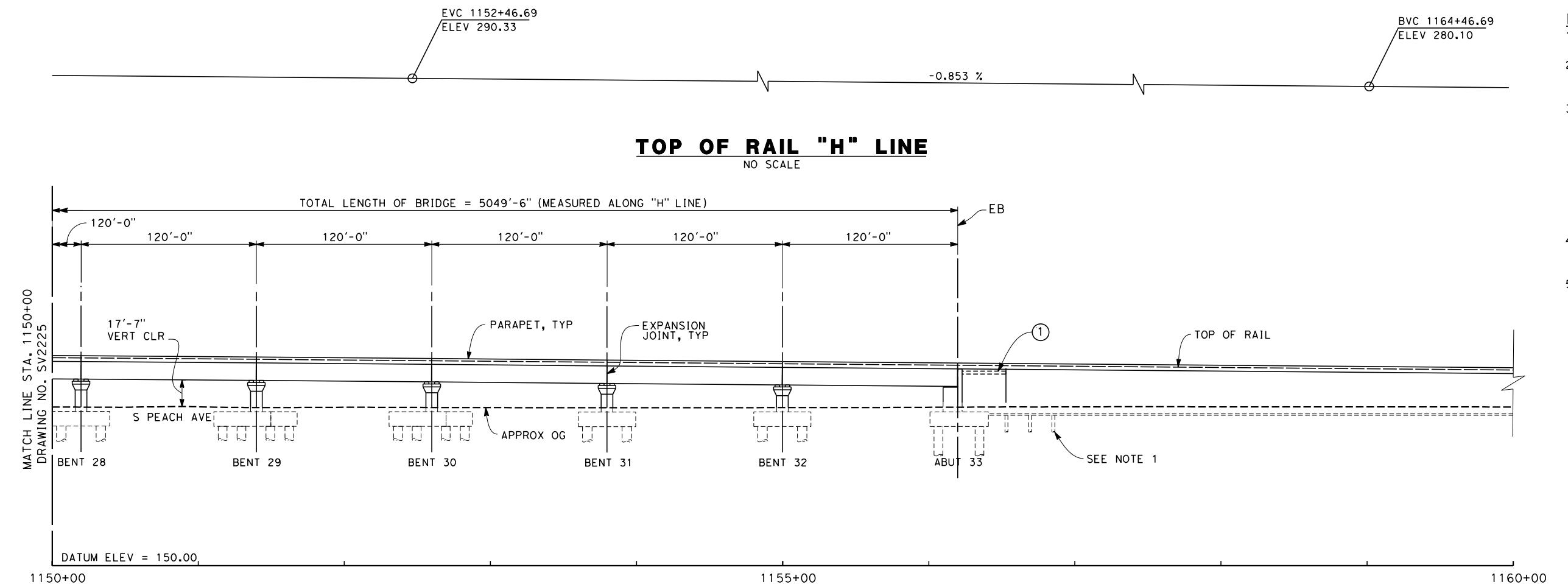
**RECORD SET 15  
DESIGN SUBMISSION**



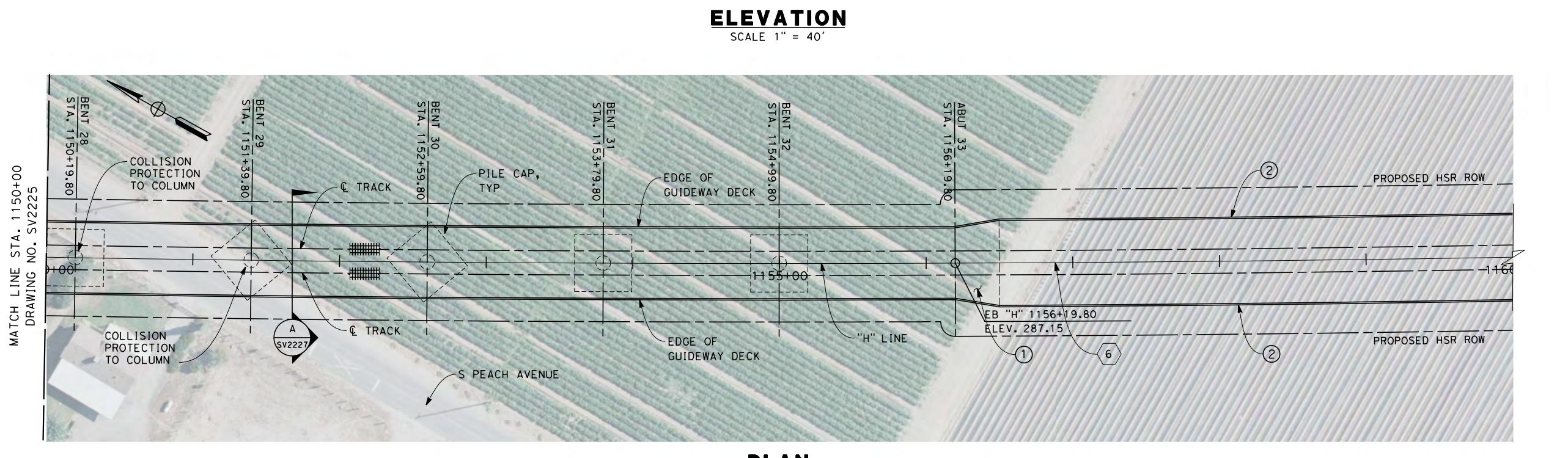
# CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION  
ALIGNMENT H  
CONEJO VIADUCT  
PLAN AND ELEVATION

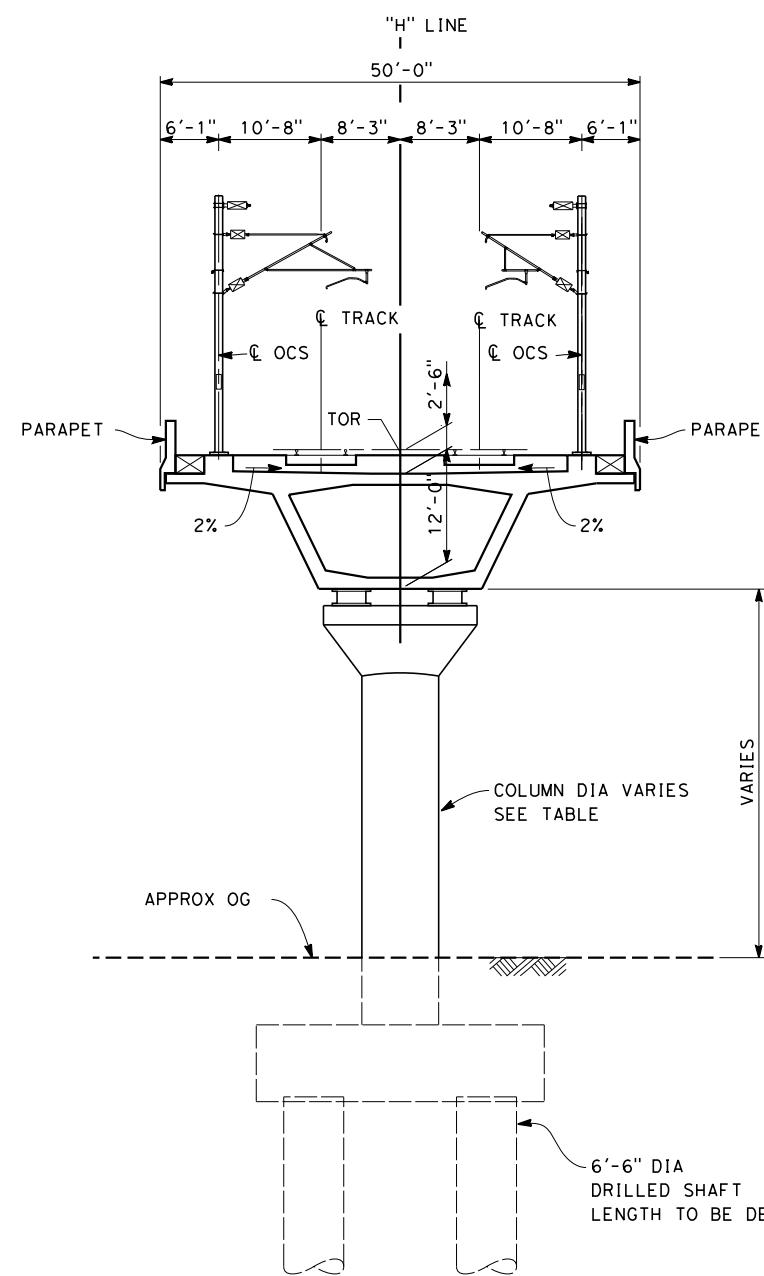
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2225  
SCALE  
AS SHOWN  
HEET NO.  
6 OF 8



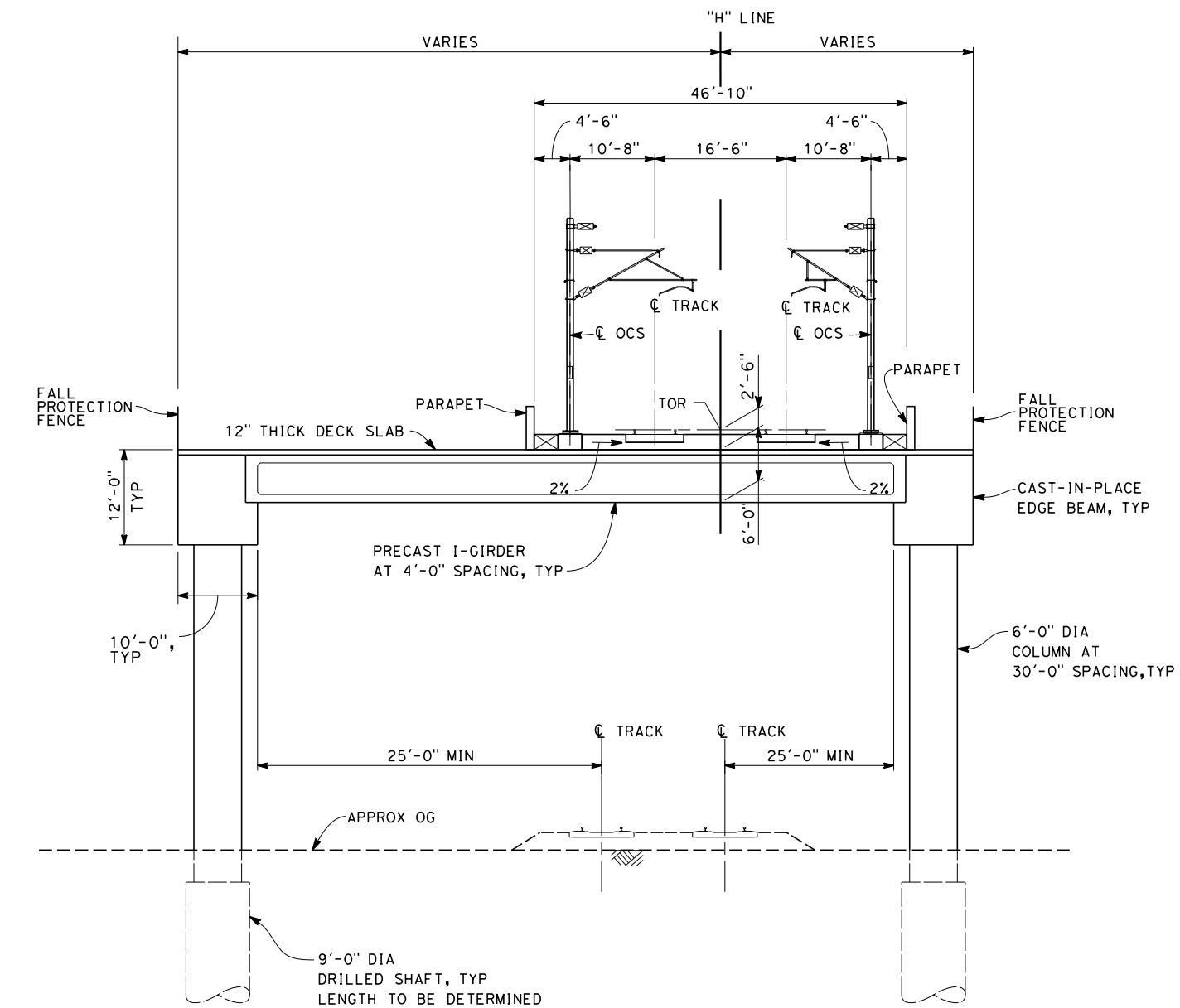
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
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40    0    40    80  
1"=40'

**SECTION A**

SCALE: 1" = 10'

STA 1105+70 THROUGH 1123+80  
STA 1133+40 THROUGH 1156+20**SECTION B**

SCALE: 1" = 10'

STA 1123+80 THROUGH 1133+40



REV	DATE	BY	CHK	APP	DESCRIPTION	DESIGNED BY M. FISHER	DRAWN BY F. PALERMO	RECORD SET 15% DESIGN SUBMISSION	NOT FOR CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
CONEJO VIADUCT  
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2227
SCALE AS SHOWN
SHEET NO. 8 OF 8



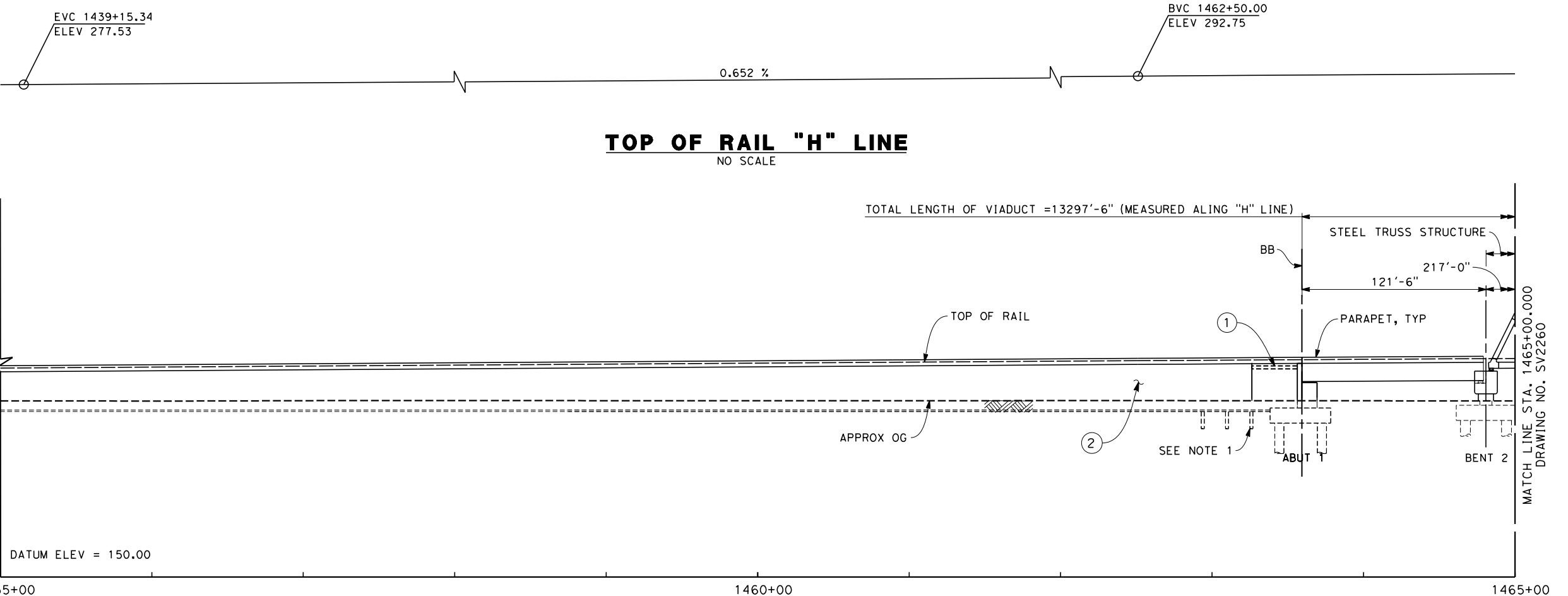
**RECORD SET 15%**  
**DESIGN SUBMISSION**  
-  
**NOT FOR  
CONSTRUCTION**



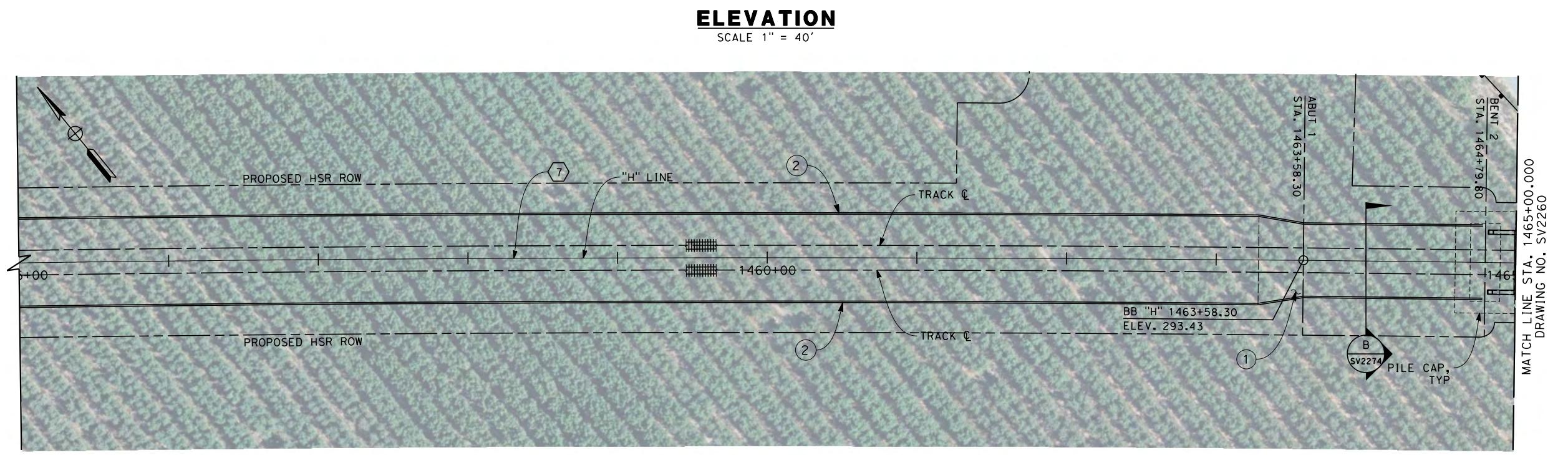
# CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2258  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 18



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

R = 36500.00'  
Delta = 58° 05' 38.8"  
T = 20271.5'  
L = 37008.6'

40      0      40      80  
1"=40'

**PLAN**  
SCALE 1" = 40'

REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

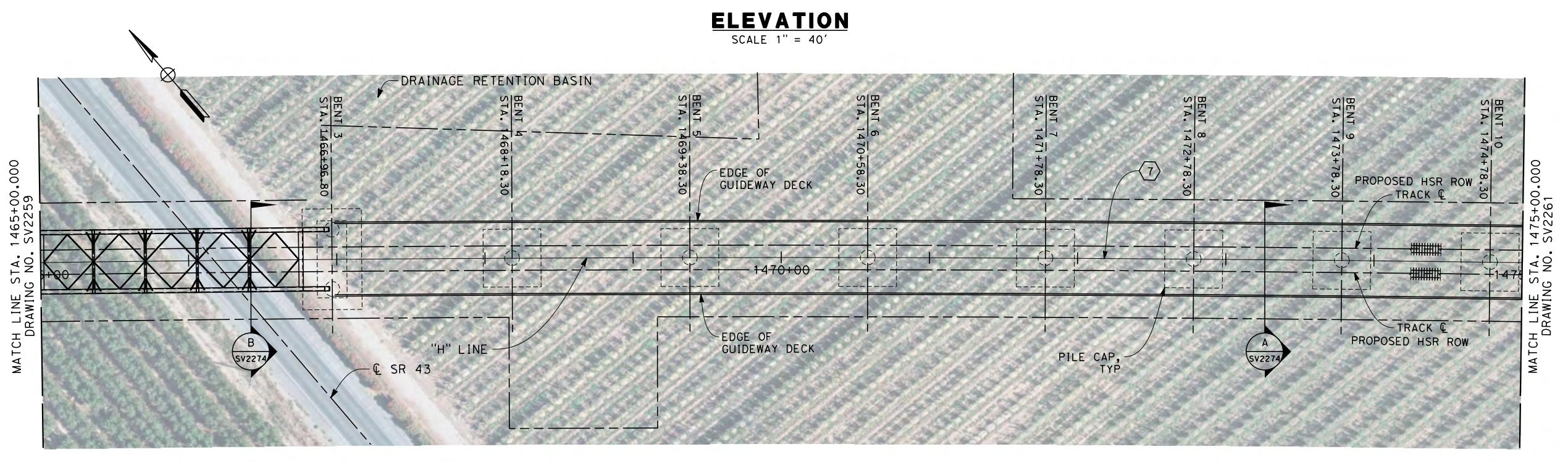
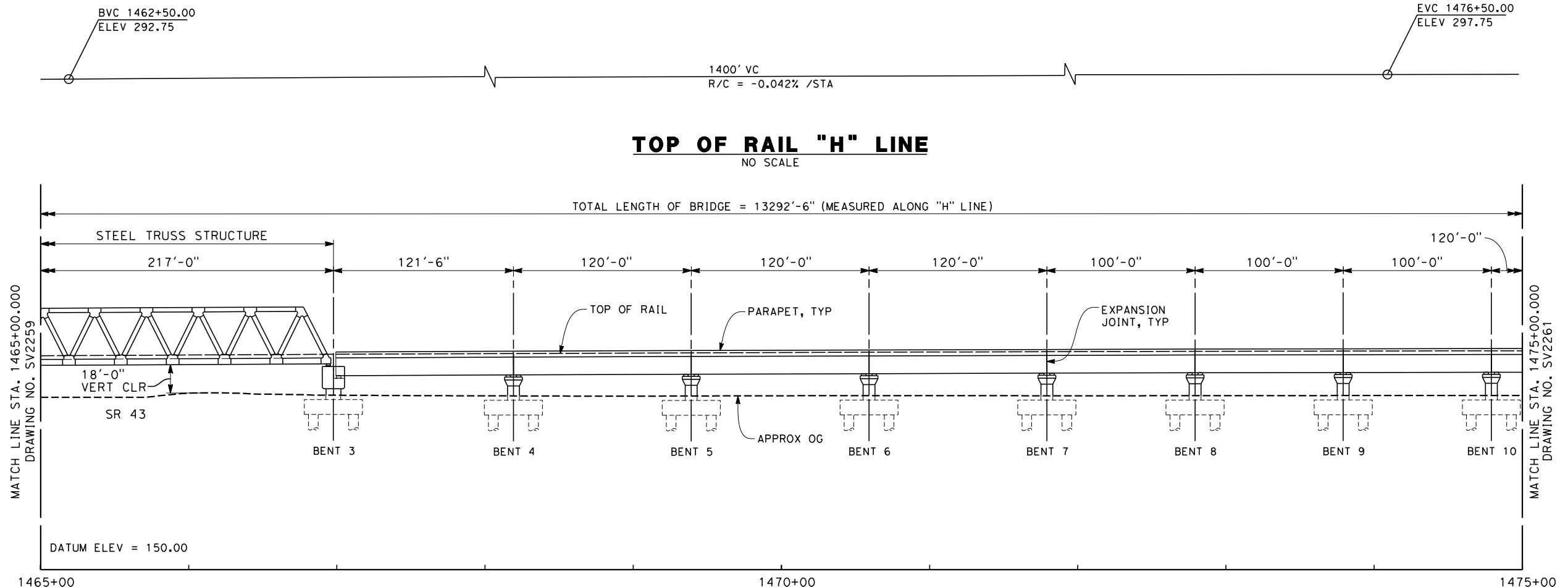
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

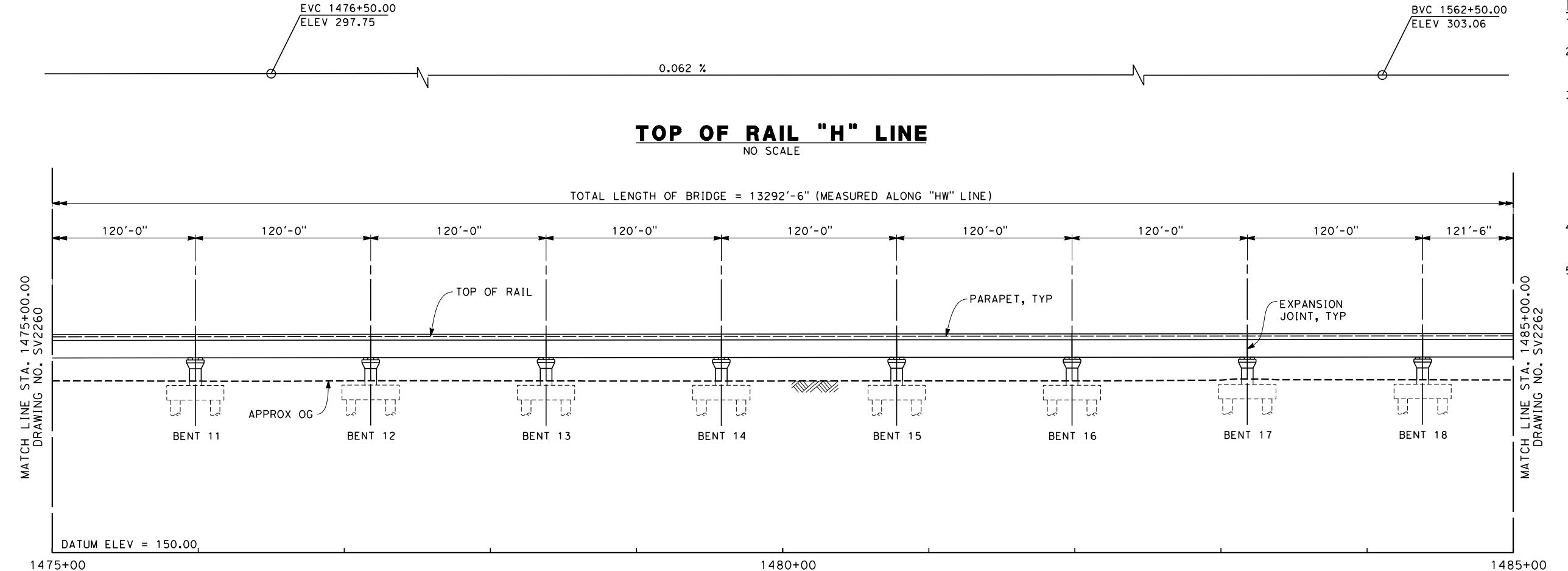


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

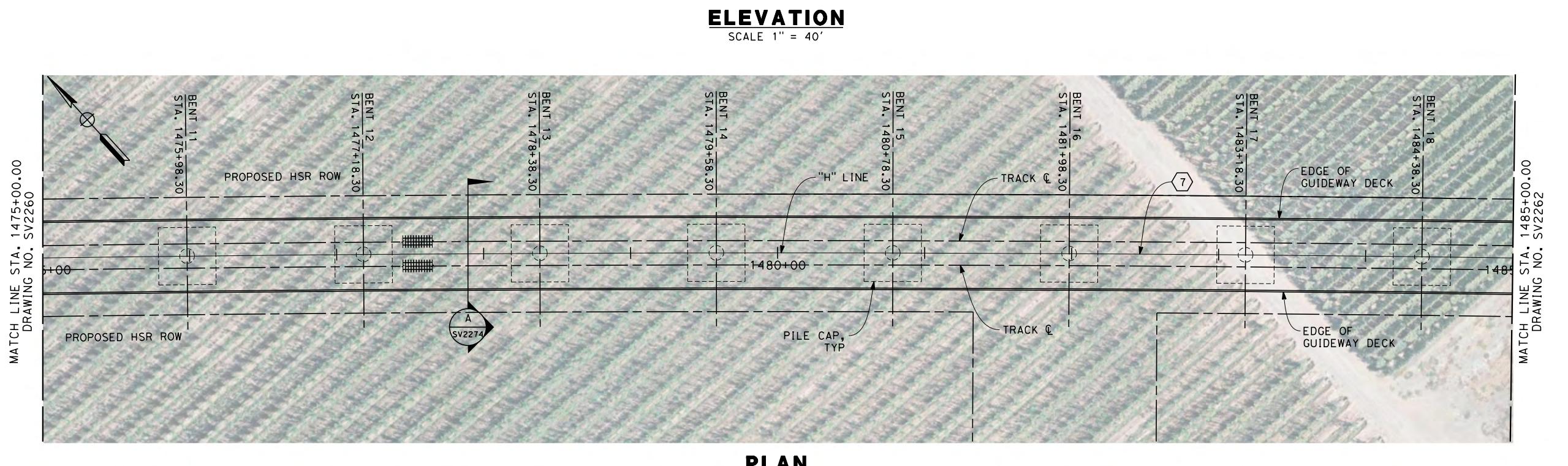
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2259  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 18



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION ALIGNMENT H	DRAWING NO. SV2260
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	KINGS RIVER VIADUCT PLAN AND ELEVATION	SCALE AS SHOWN
IN CHARGE R. COFFIN				SHEET NO. 3 OF 18
REV DATE BY CHK APP	DESCRIPTION	DATE 12/31/13		

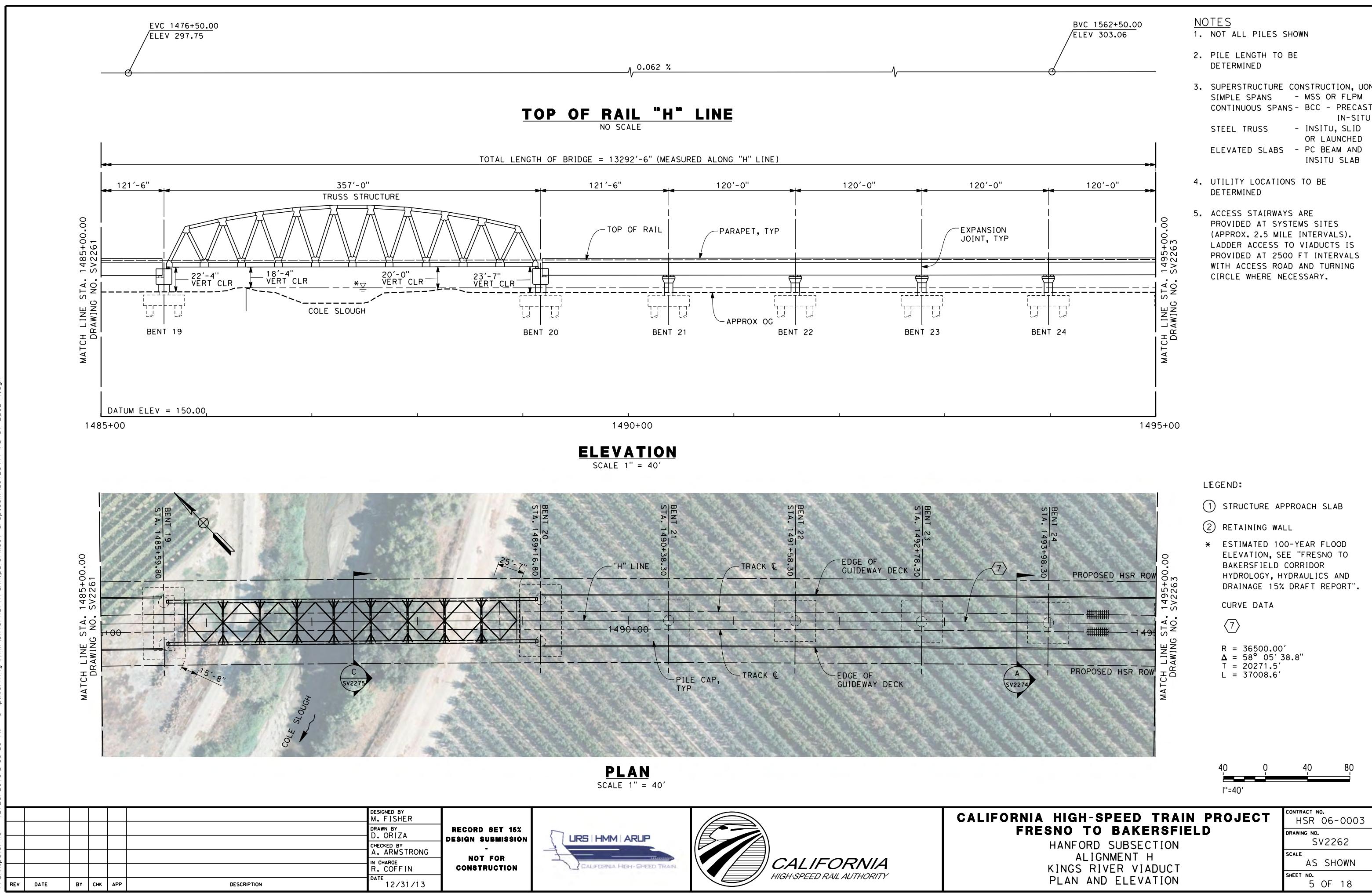


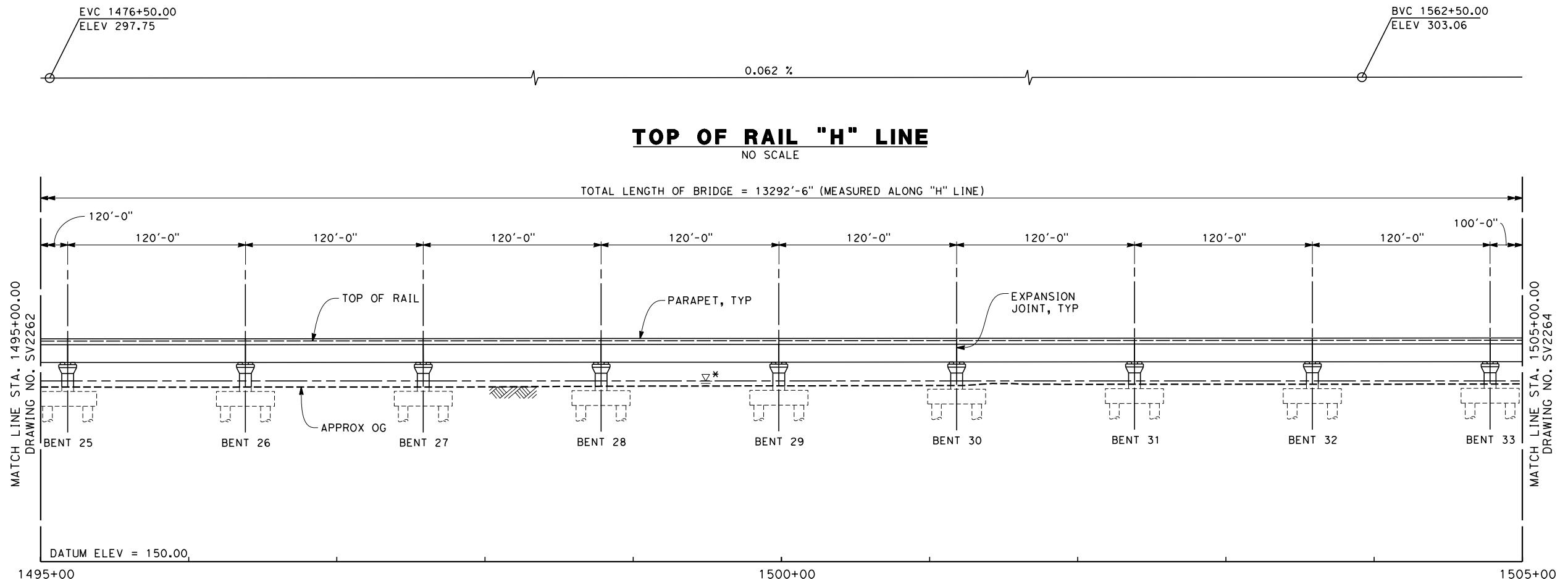
- NOTES**
1. NOT ALL FILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**PLAN**  
SCALE 1" = 40'

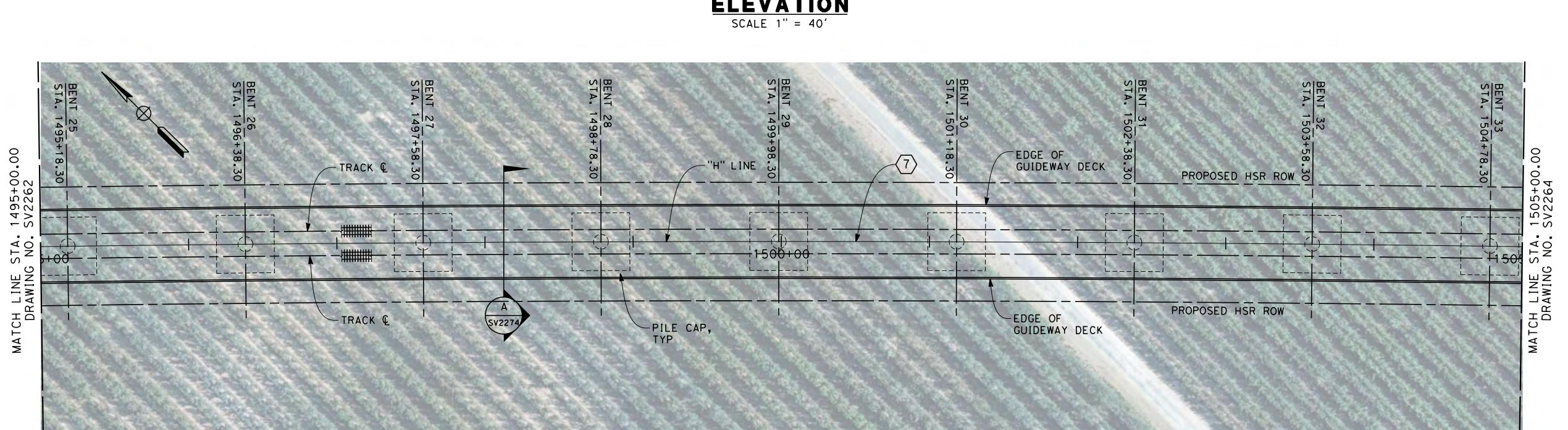
DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION ALIGNMENT H	DRAWING NO. SV2261
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION		KINGS RIVER VIADUCT PLAN AND ELEVATION	SCALE AS SHOWN
IN CHARGE R. COFFIN				SHEET NO. 4 OF 18
DATE 12/31/13	DESCRIPTION 12/31/13			
REV	DATE	BY	CHK	APP





NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
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LEGEND:

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

## CURVE DATA

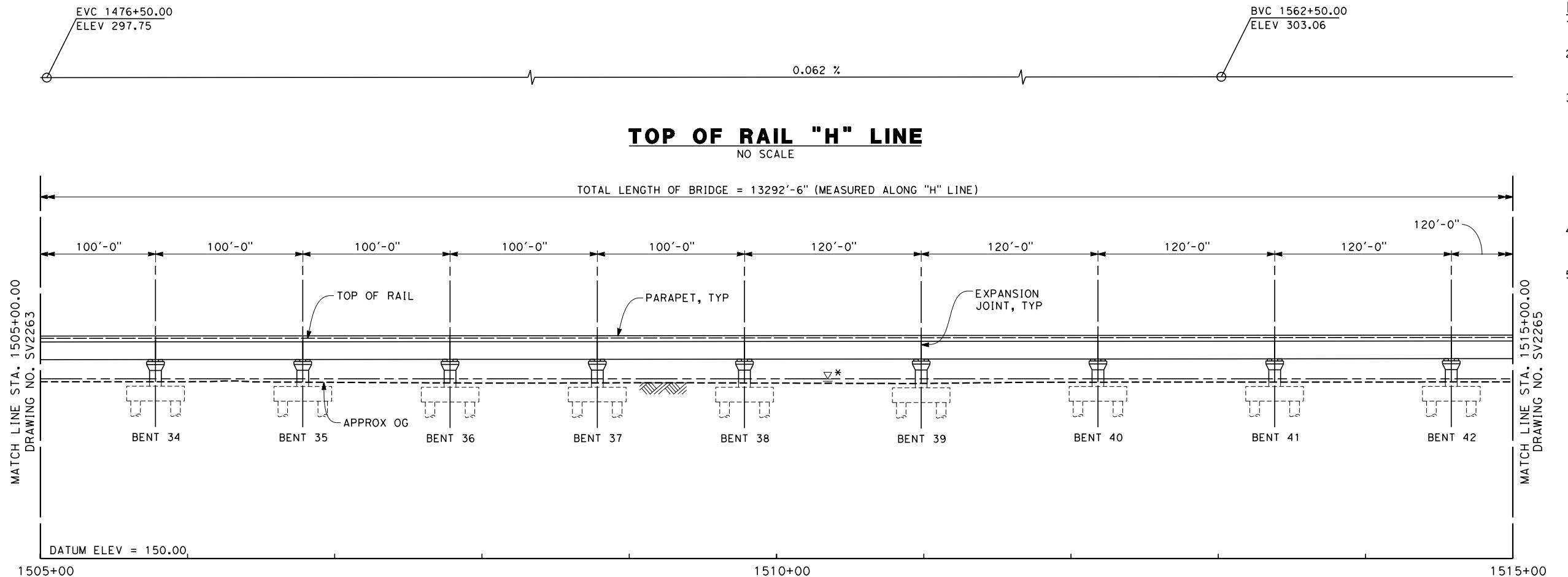
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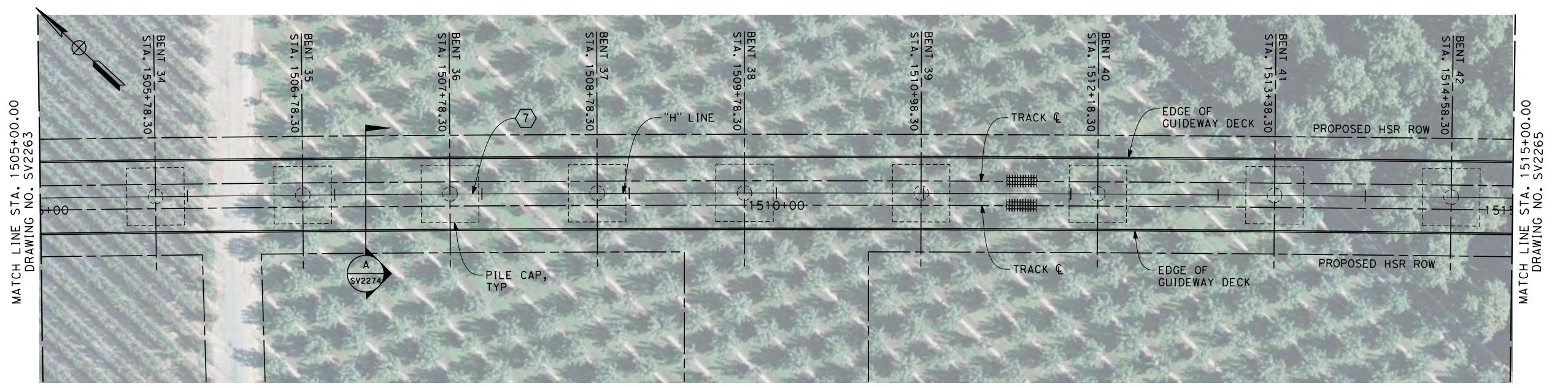
# CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERFIELD

HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2263  
SCALE  
AS SHOWN  
SHEET NO.  
6 OF 18

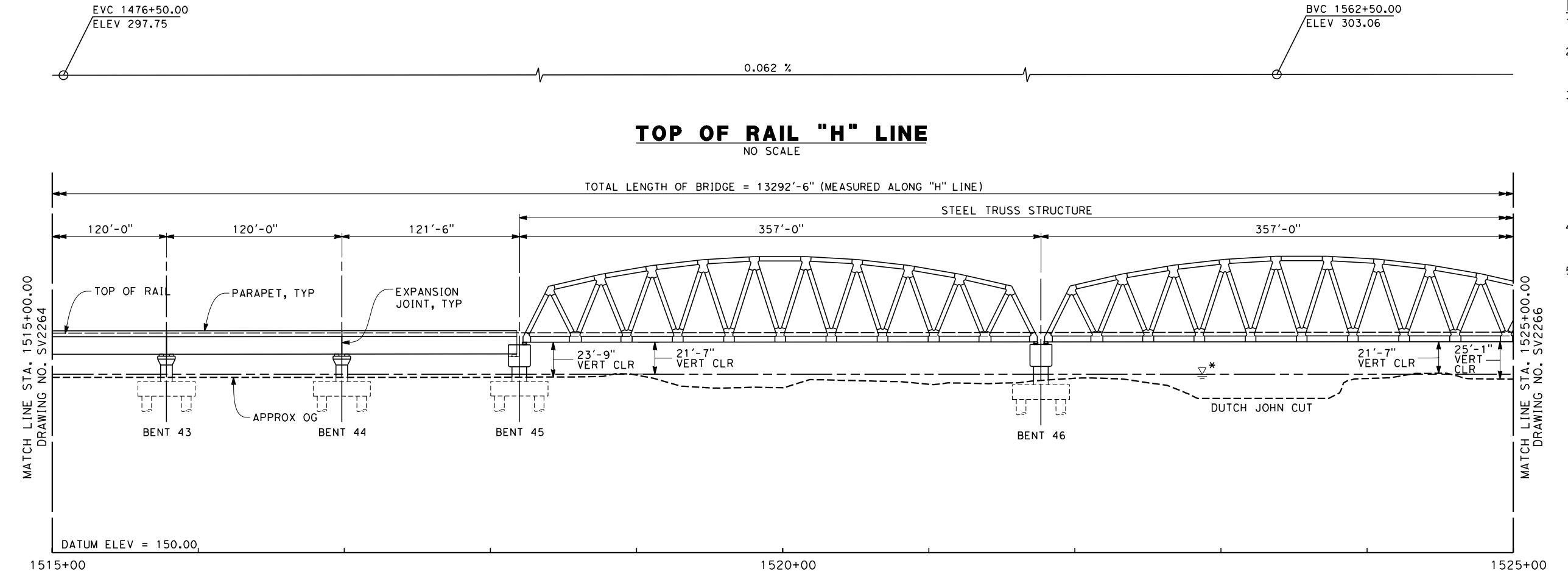


- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPN  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

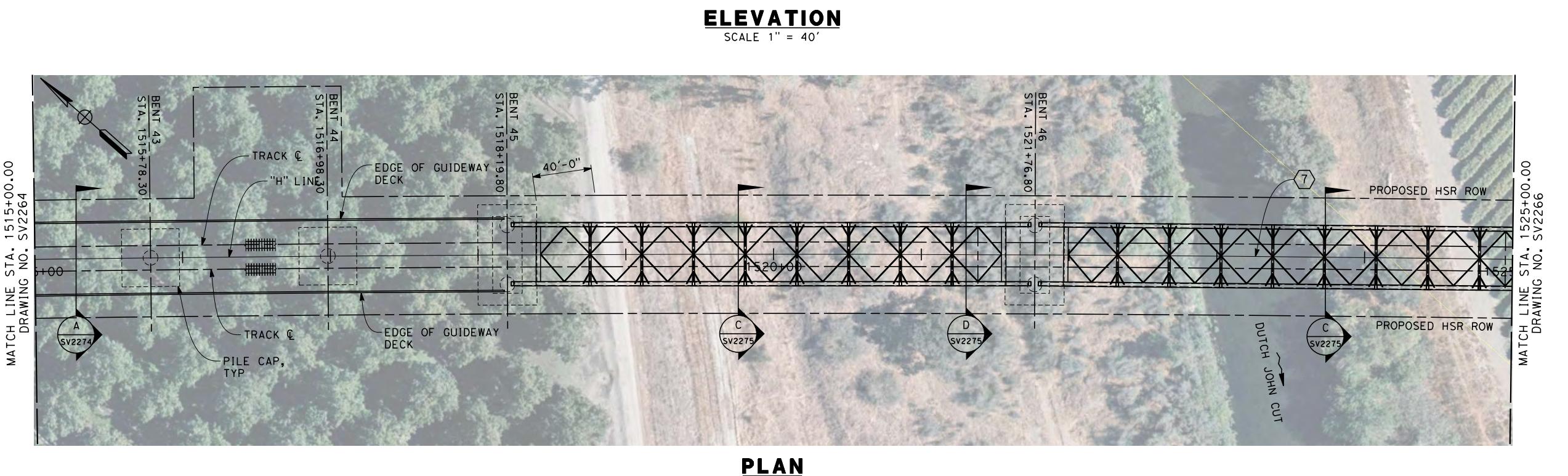


frank.palermo 12/23/2013 2:40:21 PM c:\pwworking\hmm\external\frank.palermo\drup.com\do128411\fb-sv-2264-h.dgn

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION	DRAWING NO. SV2264
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION		ALIGNMENT H	SCALE
IN CHARGE R. COFFIN			KINGS RIVER VIADUCT	AS SHOWN
DATE 12/31/13			PLAN AND ELEVATION	SHEET NO. 7 OF 18
REV	DATE	BY	CHK	APP
			DESCRIPTION	

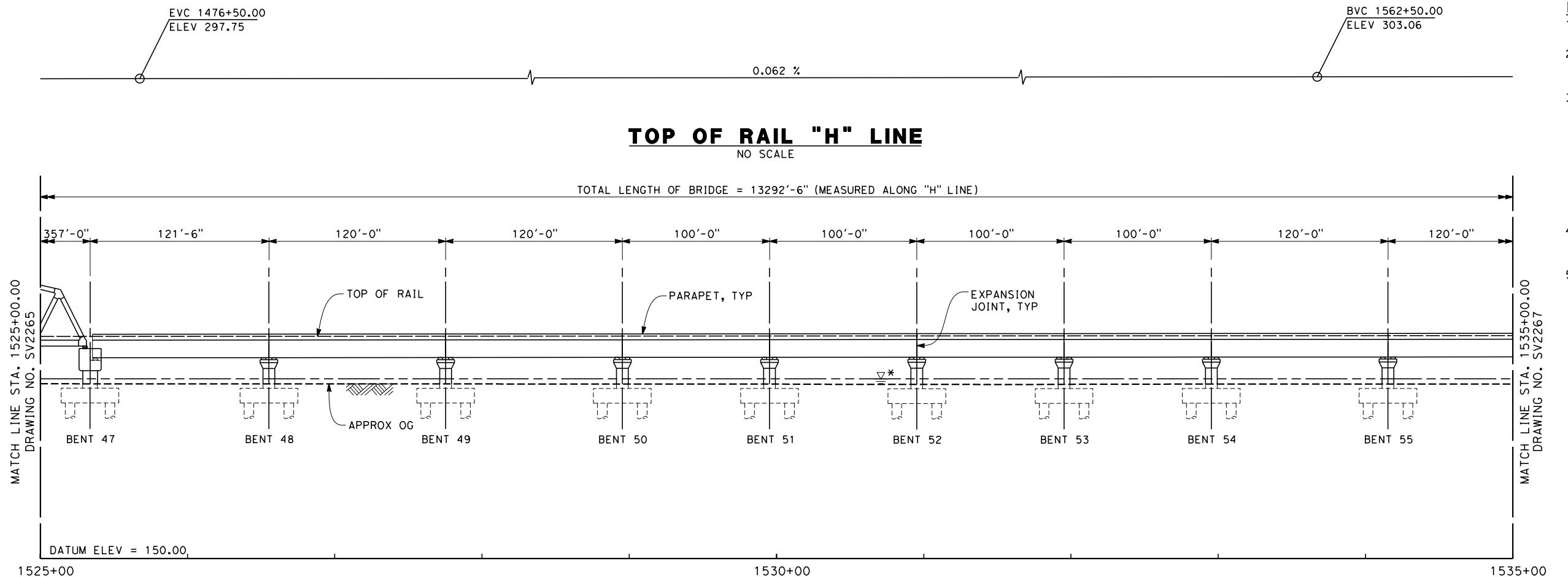


- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
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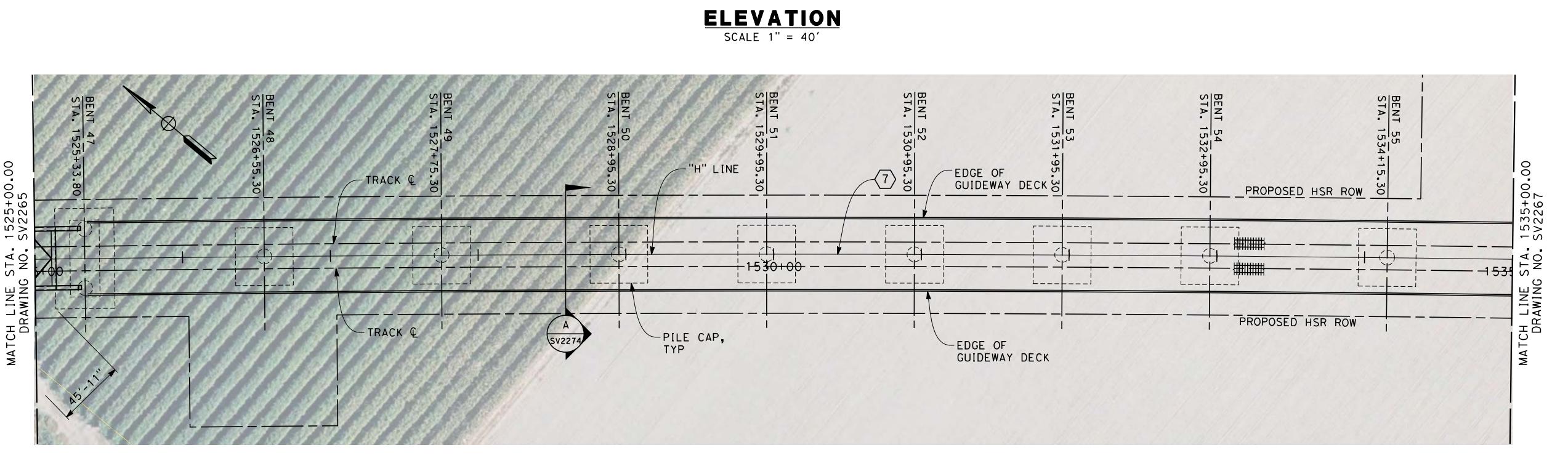


frank.palermo 12/23/2013 2:40:44 PM c:\pwworking\hmm\external\frank.palermo\drrup.com\do128411\vb-SV-2265-H.dgn

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION ALIGNMENT H	DRAWING NO. SV2265
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION		KINGS RIVER VIADUCT PLAN AND ELEVATION	SCALE AS SHOWN
IN CHARGE R. COFFIN				SHEET NO. 8 OF 18
DATE 12/31/13	BY CHK APP	DESCRIPTION		

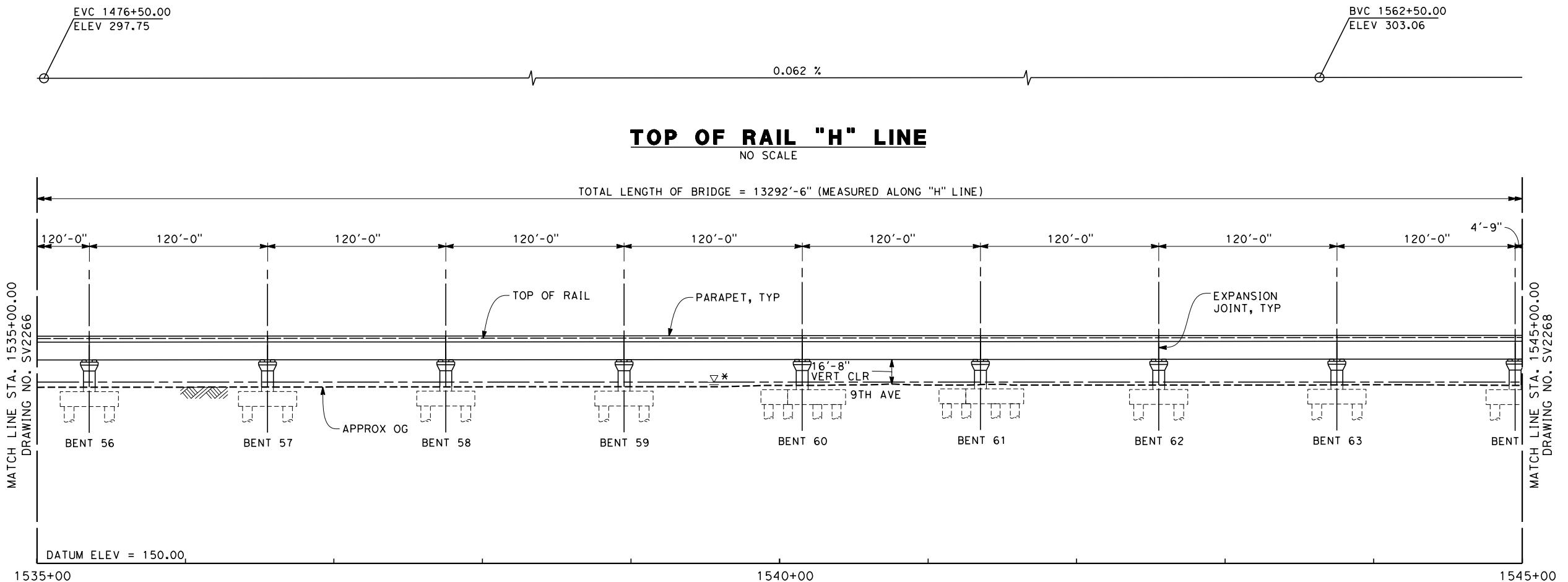


- NOTES**
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  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
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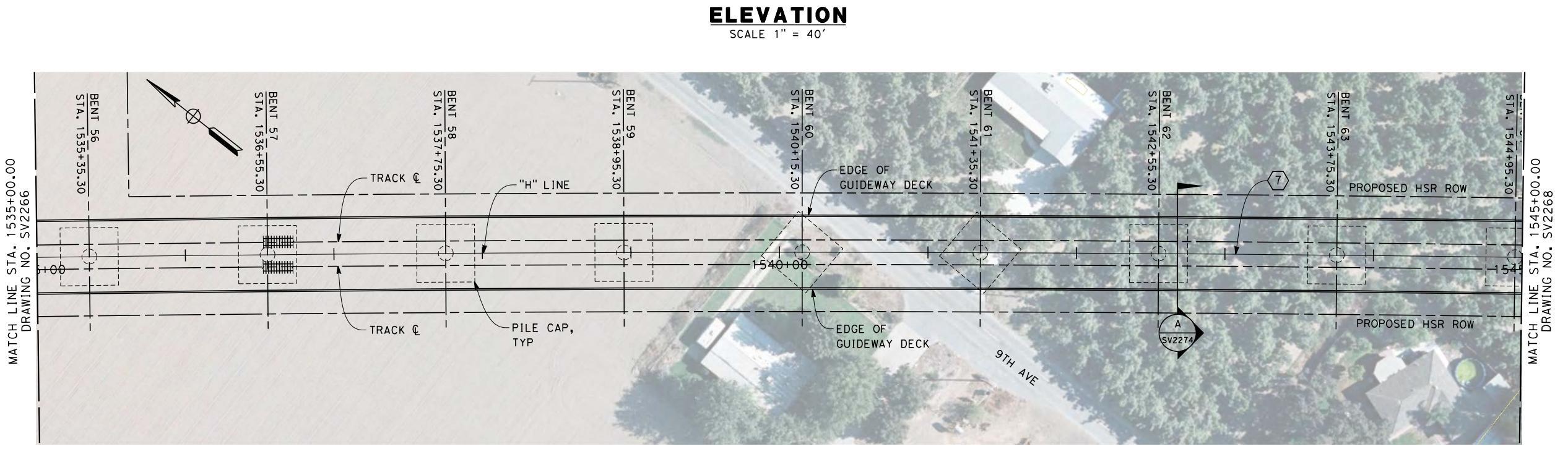


**PLAN**  
SCALE 1" = 40'

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-		HANFORD SUBSECTION	DRAWING NO. SV2266
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION		ALIGNMENT H	SCALE
IN CHARGE R. COFFIN			KINGS RIVER VIADUCT	AS SHOWN
DATE 12/31/13	DESCRIPTION	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	PLAN AND ELEVATION	SHEET NO. 9 OF 18
REV	DATE	BY	CHK	APP



- NOTES**
1. NOT ALL PILES SHOWN
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CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
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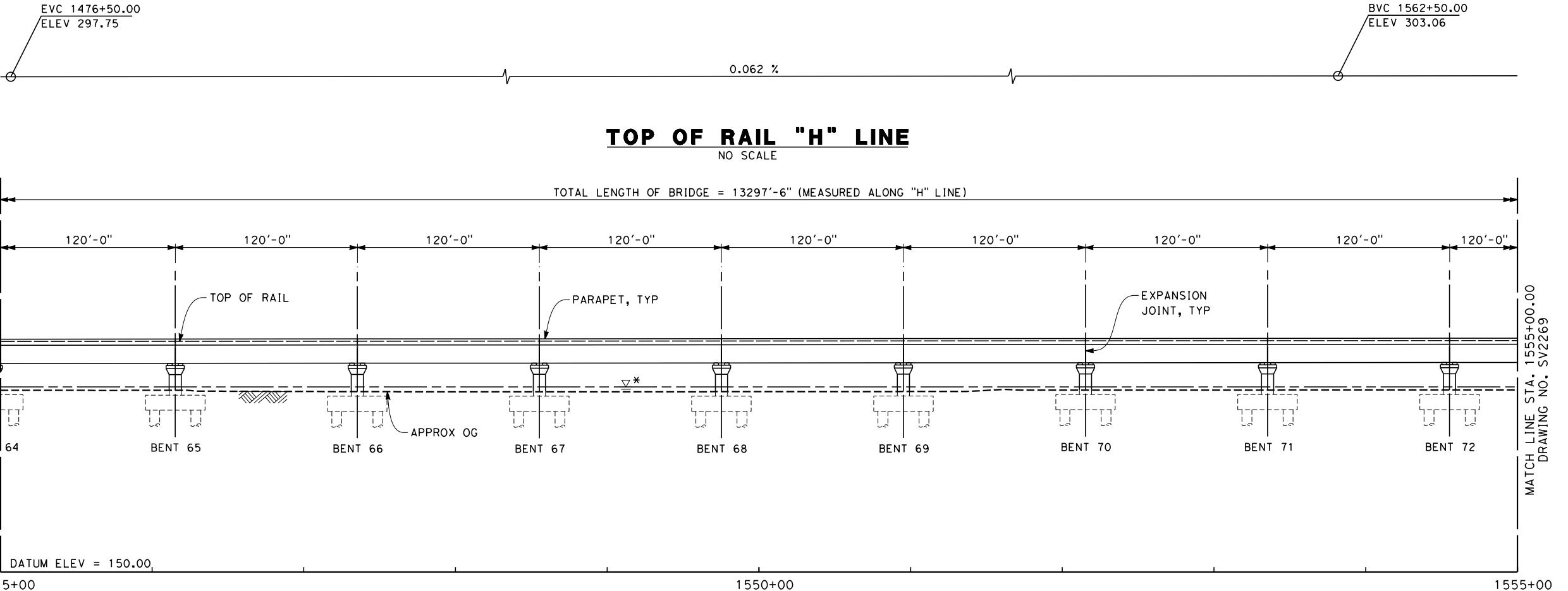
**PLAN**  
SCALE 1" = 40'



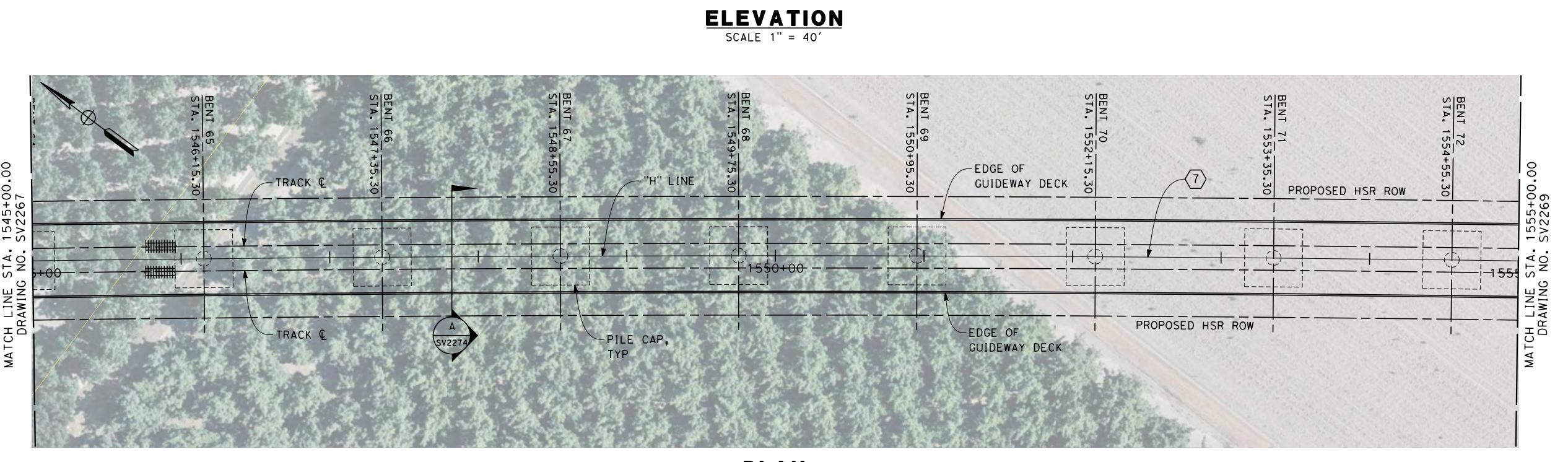
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2267  
SCALE  
AS SHOWN  
SHEET NO.  
10 OF 18

REV	DATE	BY	CHK	APP	DESCRIPTION	DESIGNED BY M. FISHER	DRAWN BY F. PALERMO	CHECKED BY A. ARMSTRONG	IN CHARGE R. COFFIN	RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION
					12/31/13					



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**PLAN**  
SCALE 1" = 40'

REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

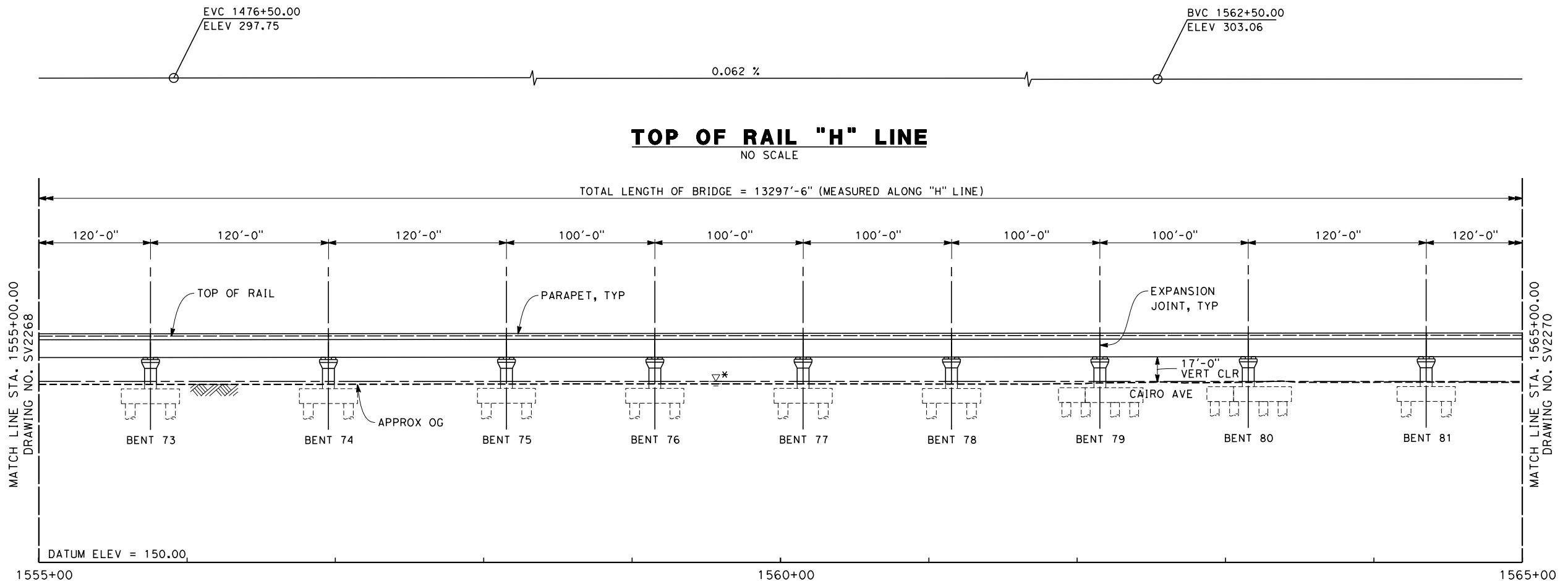
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

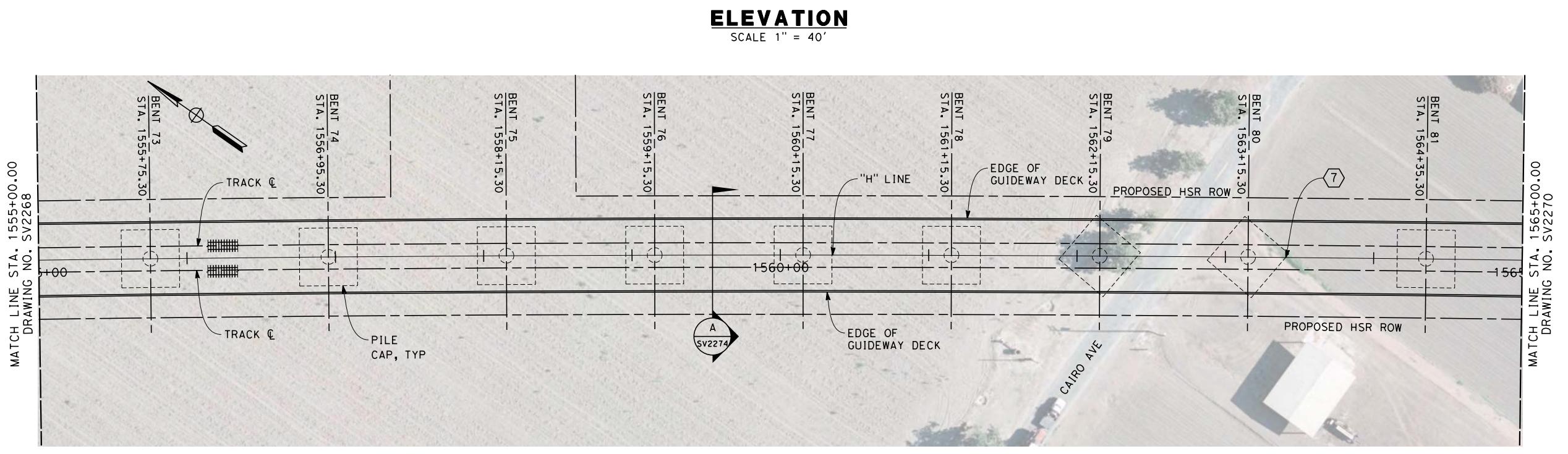


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2268  
SCALE  
AS SHOWN  
SHEET NO.  
11 OF 18



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPN  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



40 0 40 80  
1"=40'

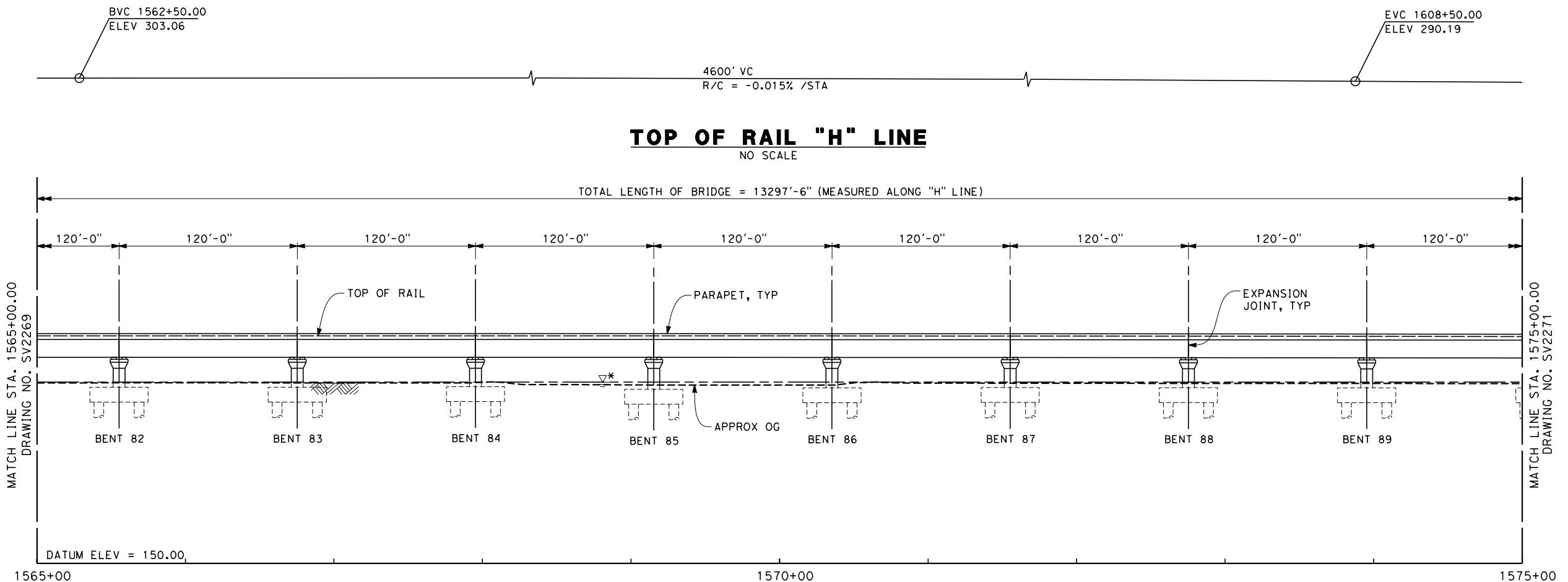
REV	DATE	BY	CHK	APP	DESCRIPTION	DESIGNED BY M. FISHER	DRAWN BY F. PALERMO	CHECKED BY A. ARMSTRONG	IN CHARGE R. COFFIN	DATE 12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

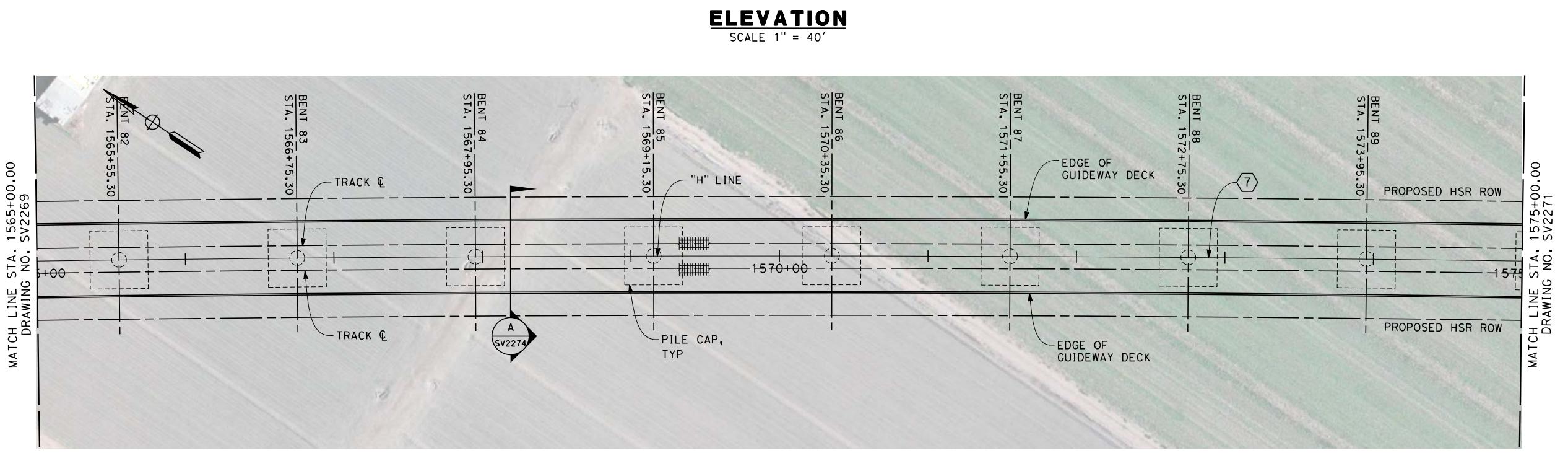


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2269  
SCALE  
AS SHOWN  
SHEET NO.  
12 OF 18



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

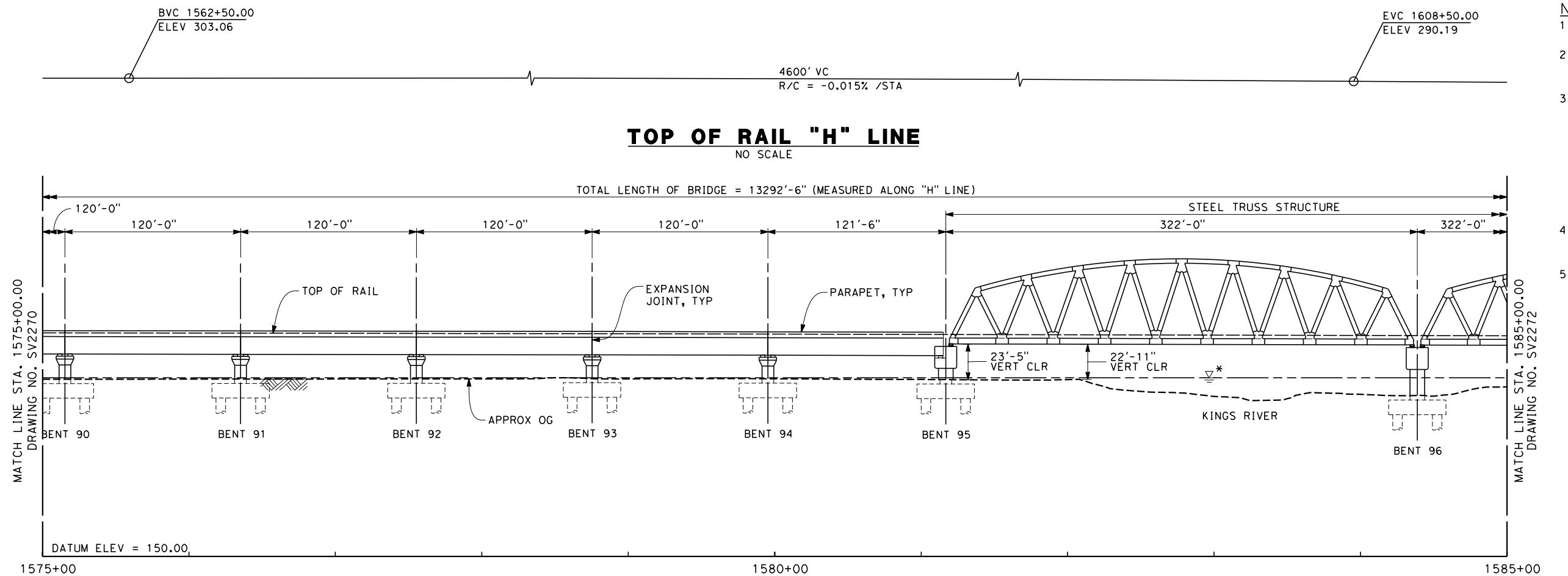
RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

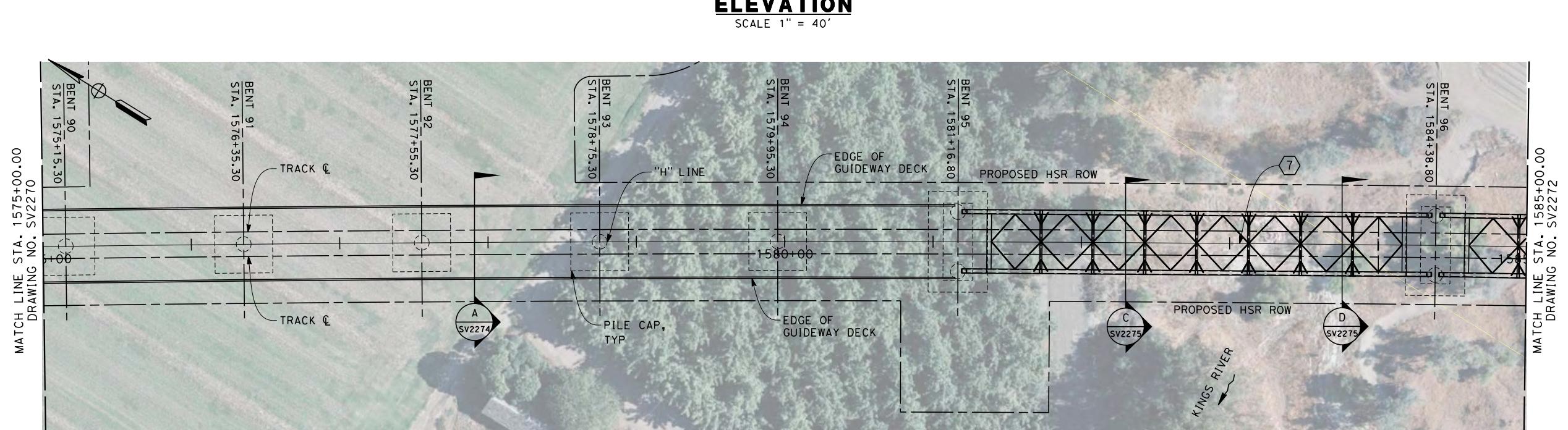
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2270  
SCALE  
AS SHOWN  
SHEET NO.  
13 OF 18

**PLAN**  
SCALE 1" = 40'



NOTES

- . NOT ALL PILES SHOWN
- . PILE LENGTH TO BE DETERMINED
- . SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
- . UTILITY LOCATIONS TO BE DETERMINED
- . ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

## CURVE DATA

$$\begin{array}{l} \text{R} = 36500.00' \\ \Delta = 58^\circ 05' 38.8'' \\ T = 20271.5' \\ L = 37008.6' \end{array}$$

A horizontal scale with major tick marks at 40, 0, 40, and 80. The scale is labeled "L'-40'" at the left end.

	DES
	M.
	DRA
	F.
	CHE
	A.
	IN
	R.
OPTION	DATA

BY  
SHER  
Y  
ELERMO  
BY  
MSTRONG  
E  
EFFIN

RECORD SET  
DESIGN SUBMISS

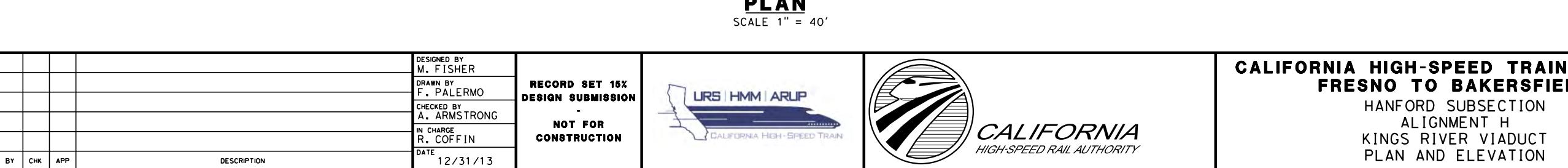
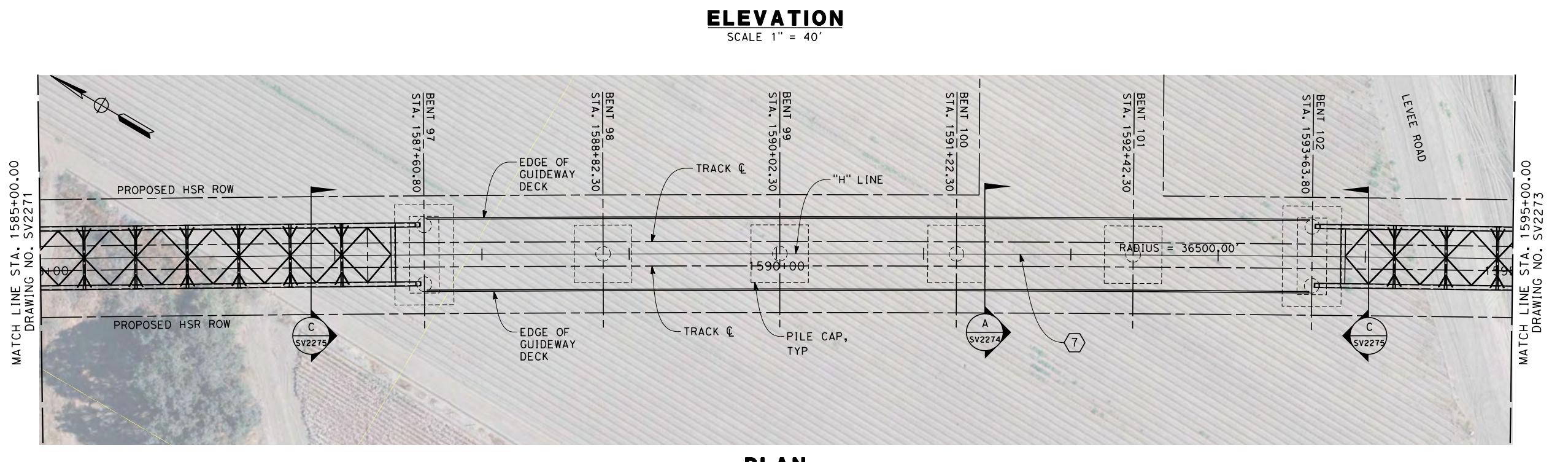
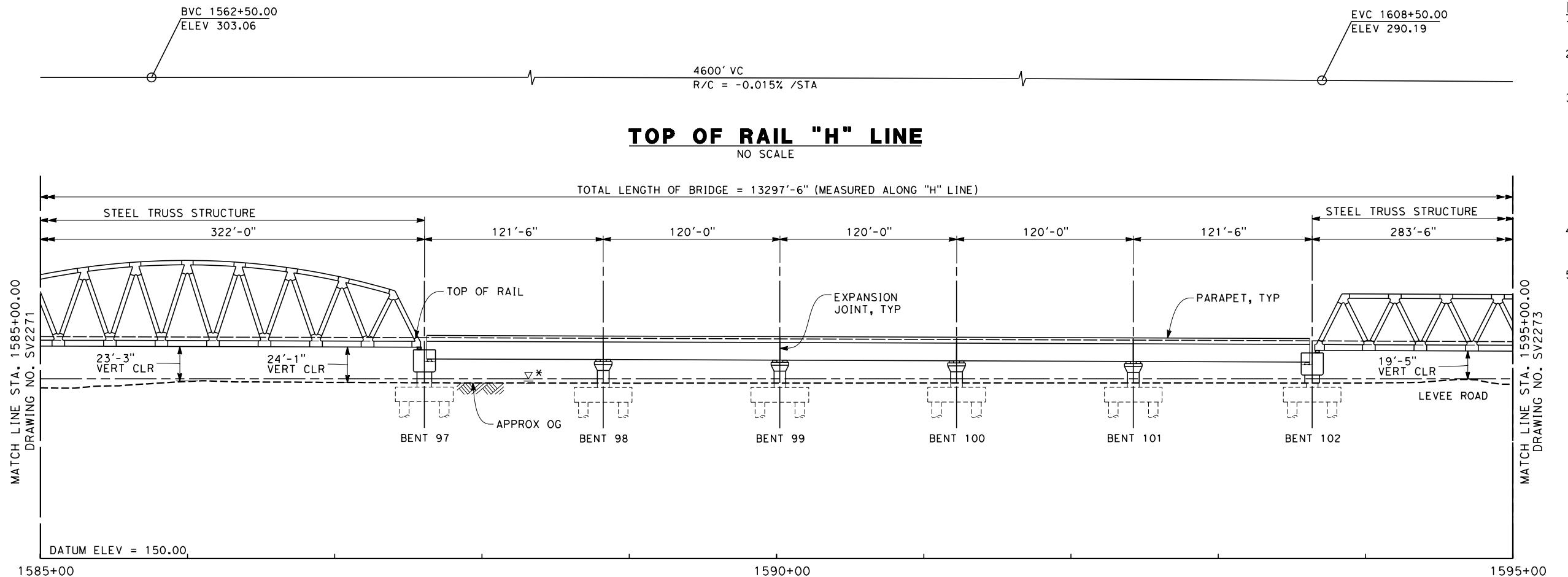
NOT FOR  
CONSTRUCTI

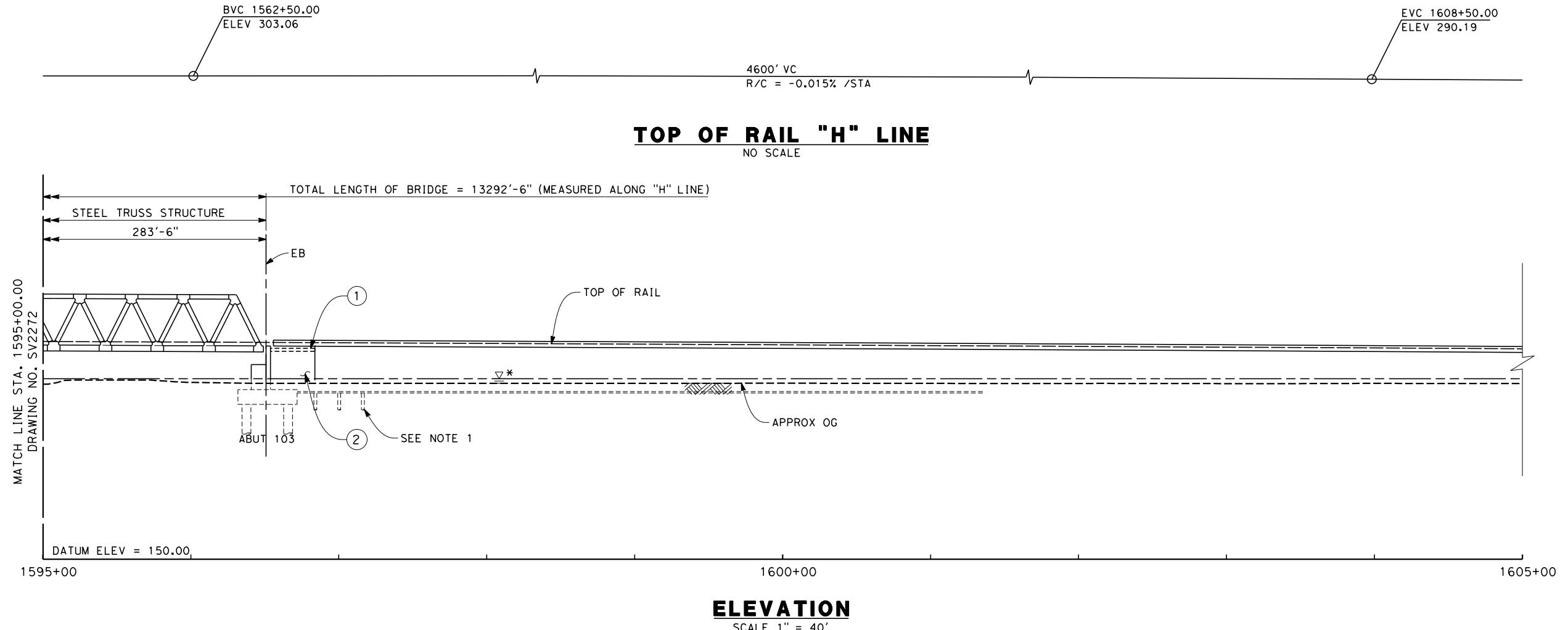


# CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

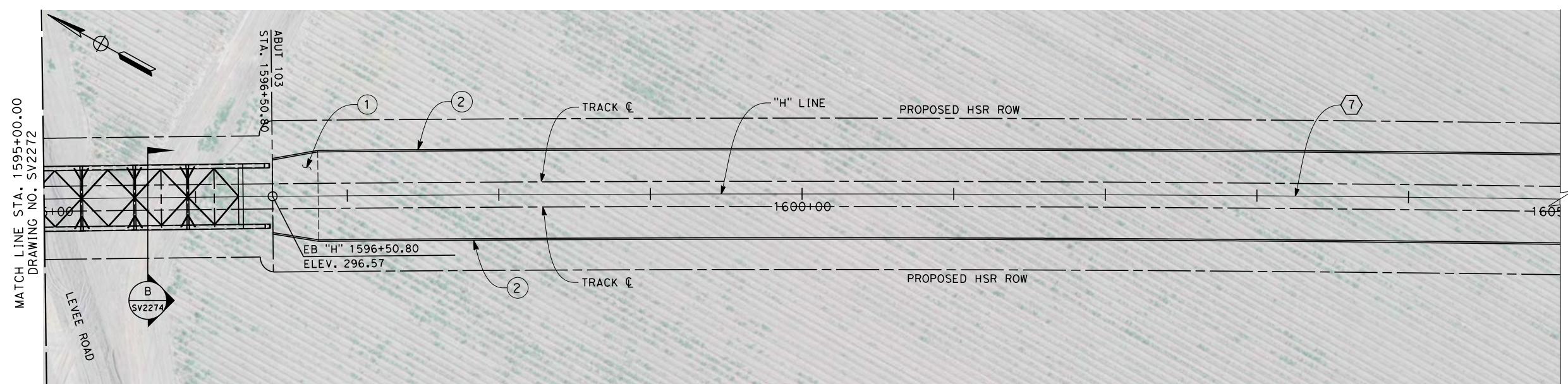
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2271  
SCALE  
AS SHOWN  
SHEET NO.  
14 OF 18





## **ELEVATION**

SCALE 1" = 40'



## **PLAN**

SCALE 1" = 40'



# **CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD**

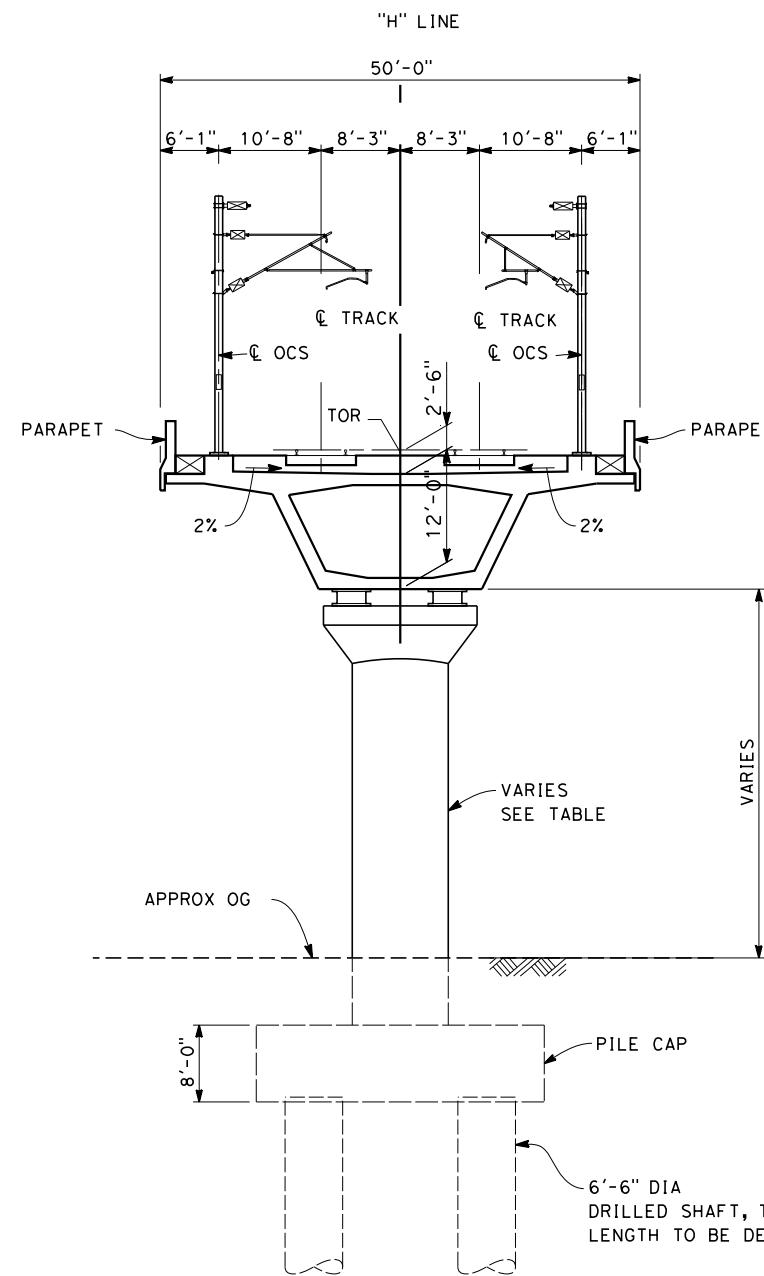
HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

**CONTRACT NO.**  
**HSR 06-0003**

**DRAWING NO.**  
**SV2273**

**SCALE**  
**AS SHOWN**

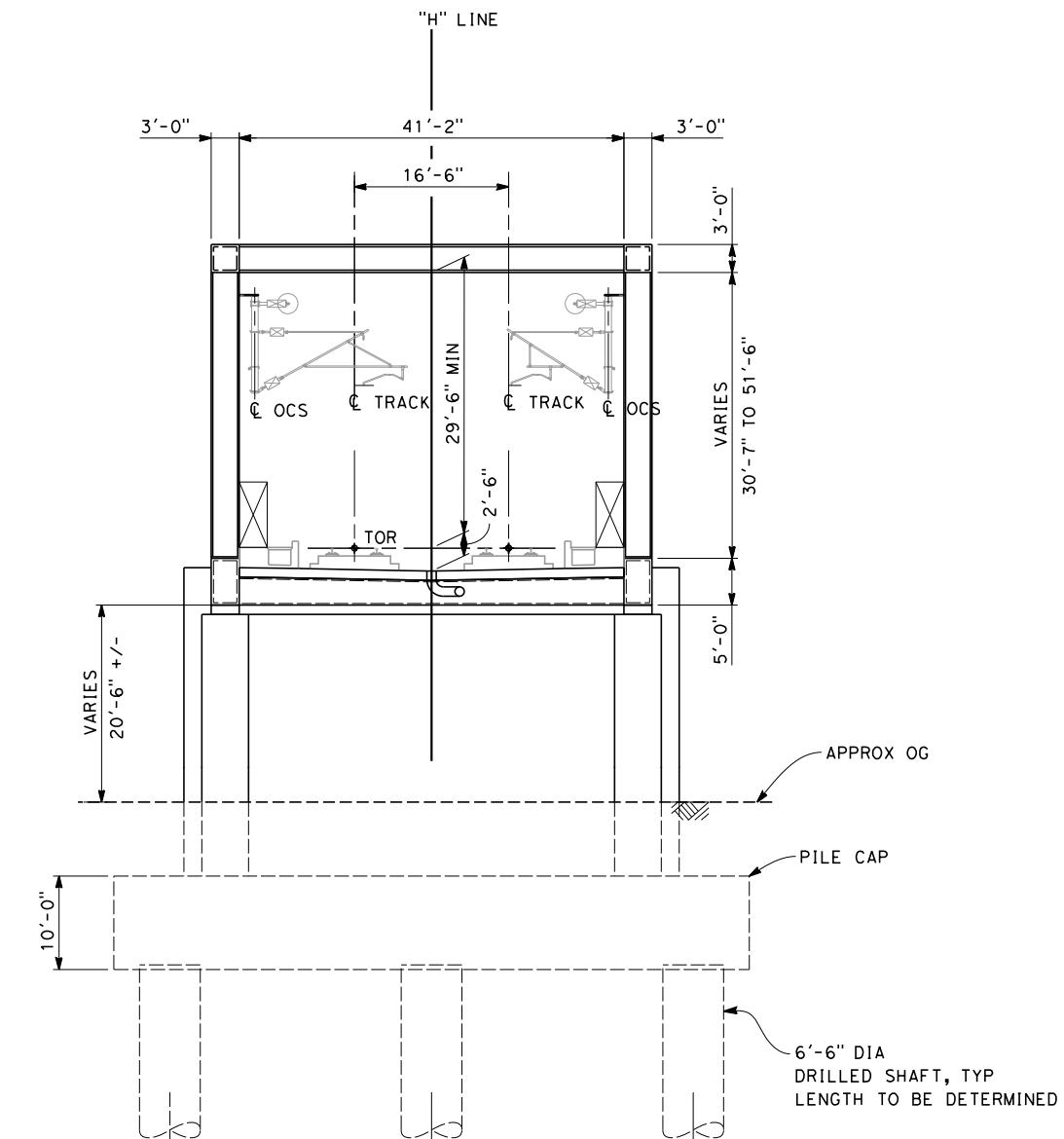
**HEET NO.**  
**16 OF 18**

**SECTION A**

SCALE: 1" = 10'

STA 1468+18 THROUGH 1485+70  
 STA 1489+27 THROUGH 1518+30  
 STA 1525+44 THROUGH 1580+87  
 STA 1587+31 THROUGH 1593+34

COLUMN DIAMETERS	
COLUMN HEIGHT	DIAMETER
0-20	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT

**SECTION B**

SCALE: 1" = 10'

STA 1463+48 (BENT 2)  
 STA 1466+96 (BENT 3)  
 STA 1596+52 (ABUT 90)



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

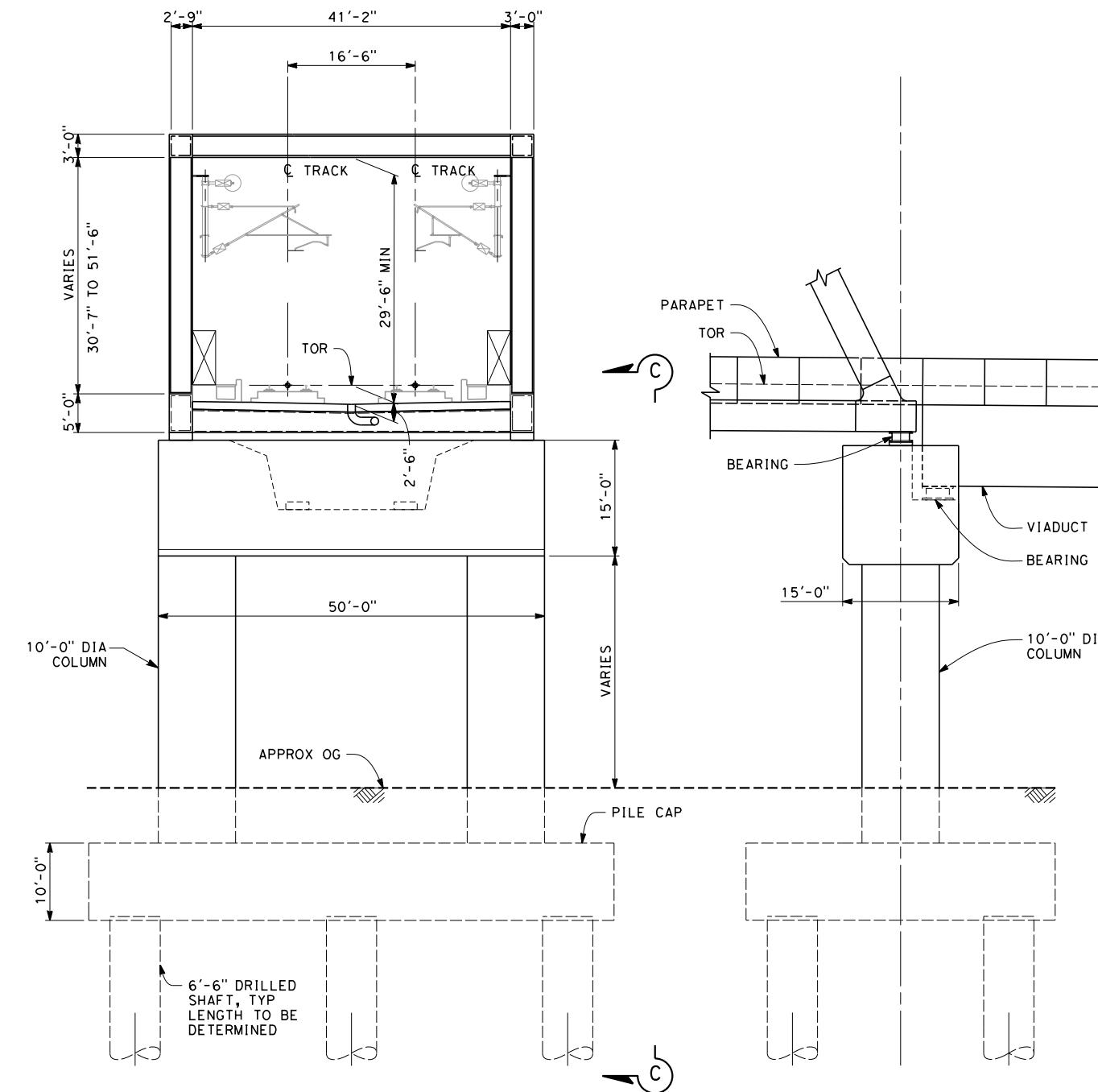
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 HANFORD SUBSECTION  
 ALIGNMENT H  
 KINGS RIVER VIADUCT  
 TYPICAL SECTIONS

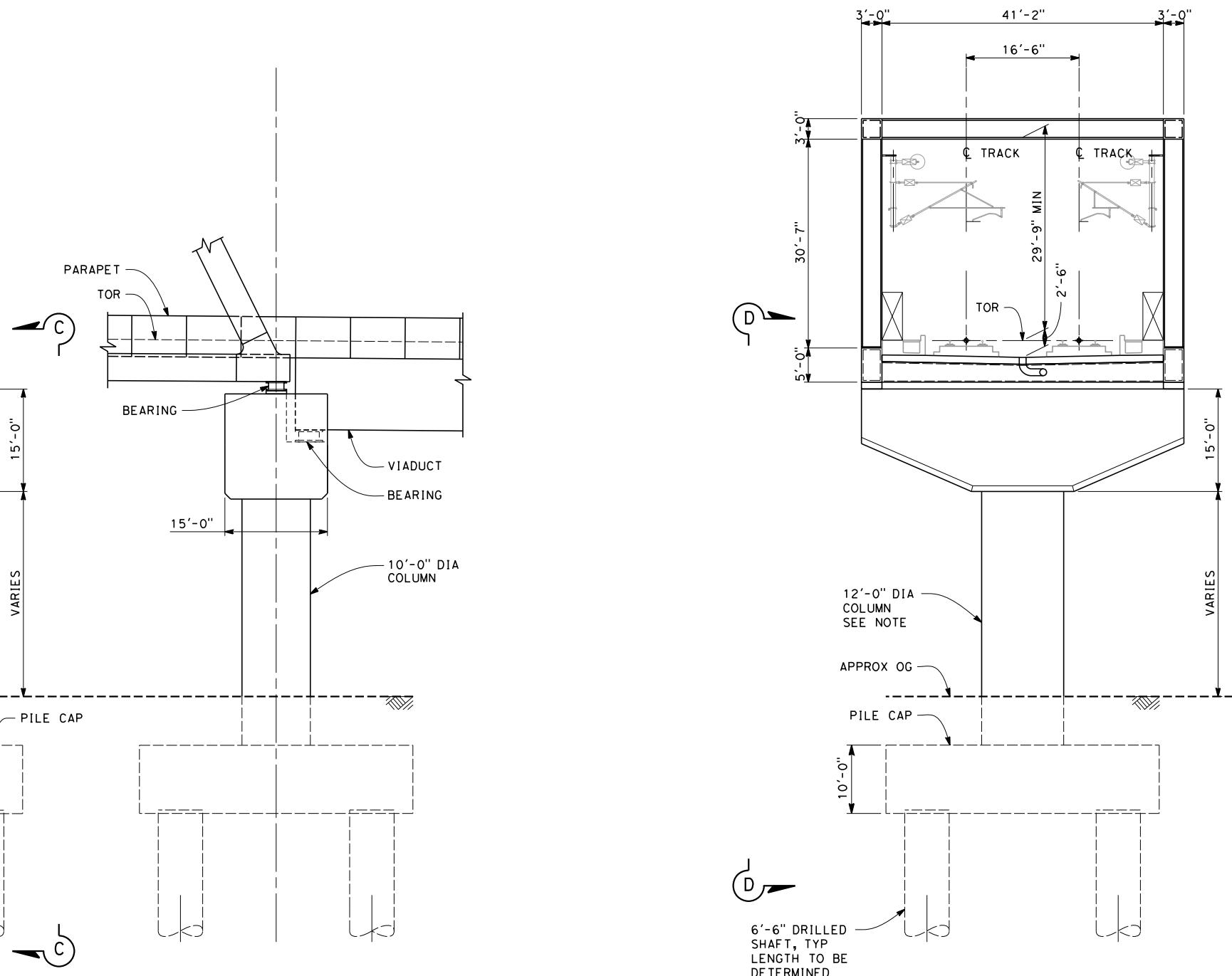
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2274  
SCALE  
AS SHOWN  
SHEET NO.  
17 OF 18



**SECTION C**

SCALE: 1" = 10'

STA 1485+70 THROUGH 1489+27  
STA 1518+30 THROUGH 1525+44  
STA 1580+97 THROUGH 1587+31  
STA 1593+34 THROUGH 1596+52



**SECTION D**

SCALE: 1" = 10'

STA 1521+87 (BENT 33)  
STA 1584+09 (BENT 83)



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION
DRAWN BY F. PALERMO	-
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION
IN CHARGE R. COFFIN	
DATE	



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
KINGS RIVER VIADUCT  
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2275
SCALE AS SHOWN
SHEET NO. 18 OF 18



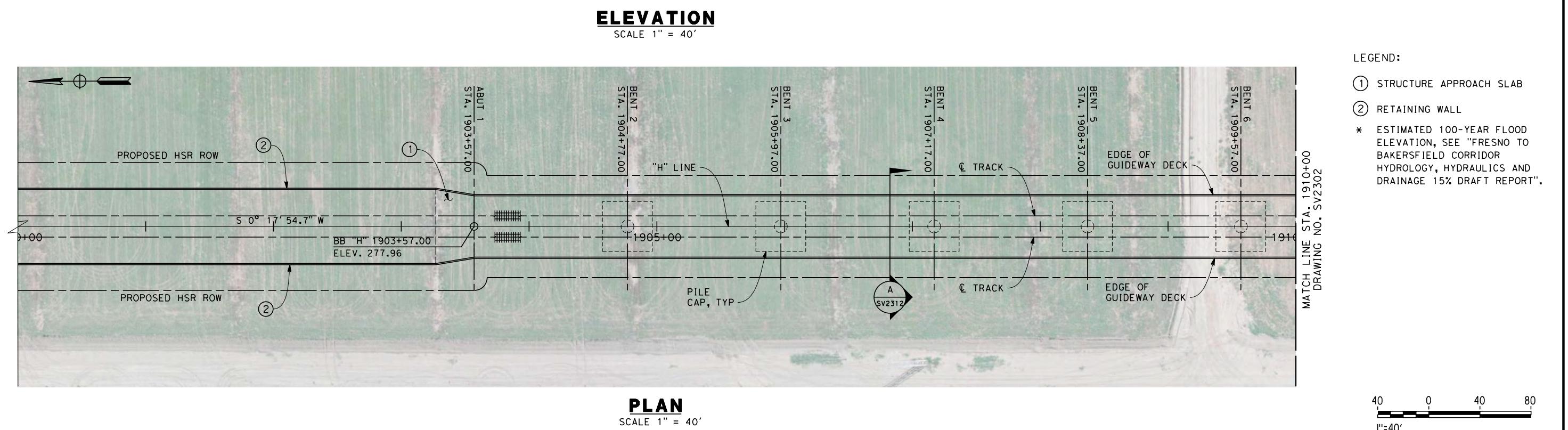
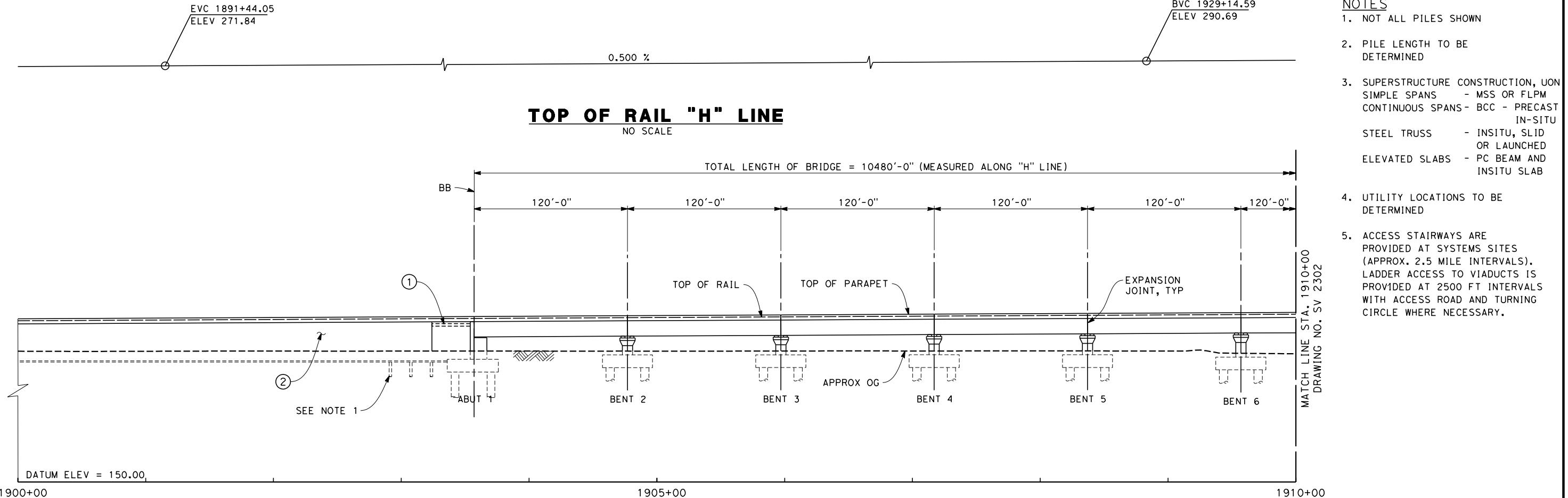
DESIGNED BY Y. REN	RECORD SET 15% DESIGN SUBMISSION
DRAWN BY E. SUDHAUSEN	-
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION
IN CHARGE R. COFFIN	
DATE 12/31/13	DATE

REV DATE BY CHK APP DESCRIPTION



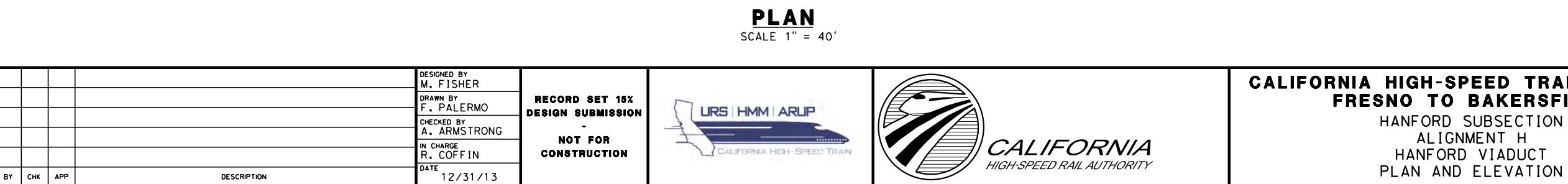
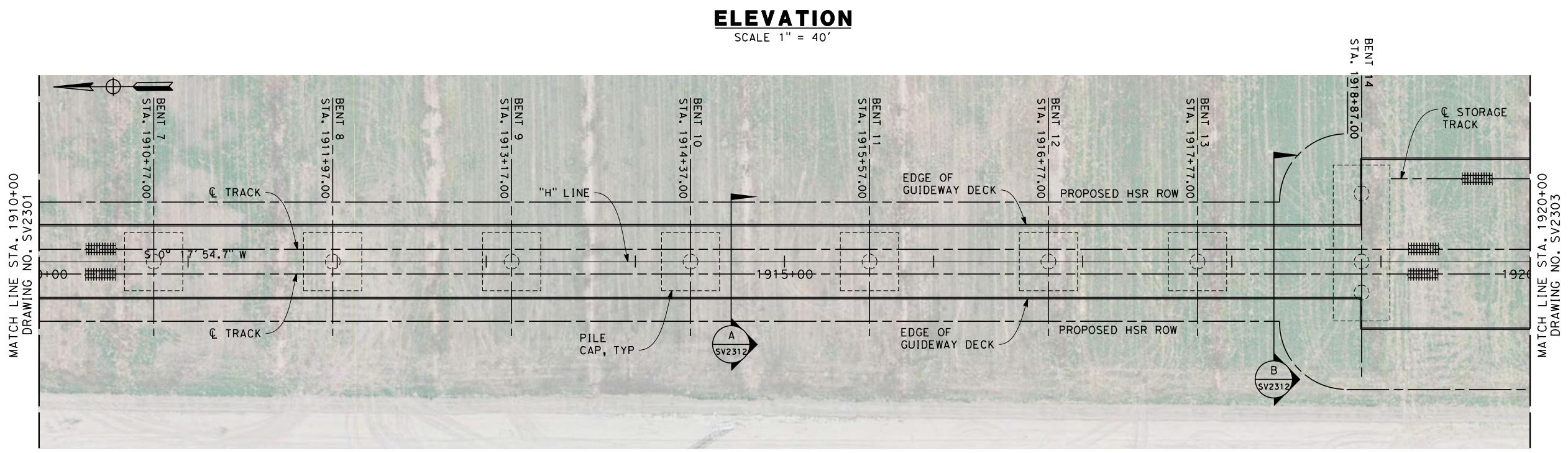
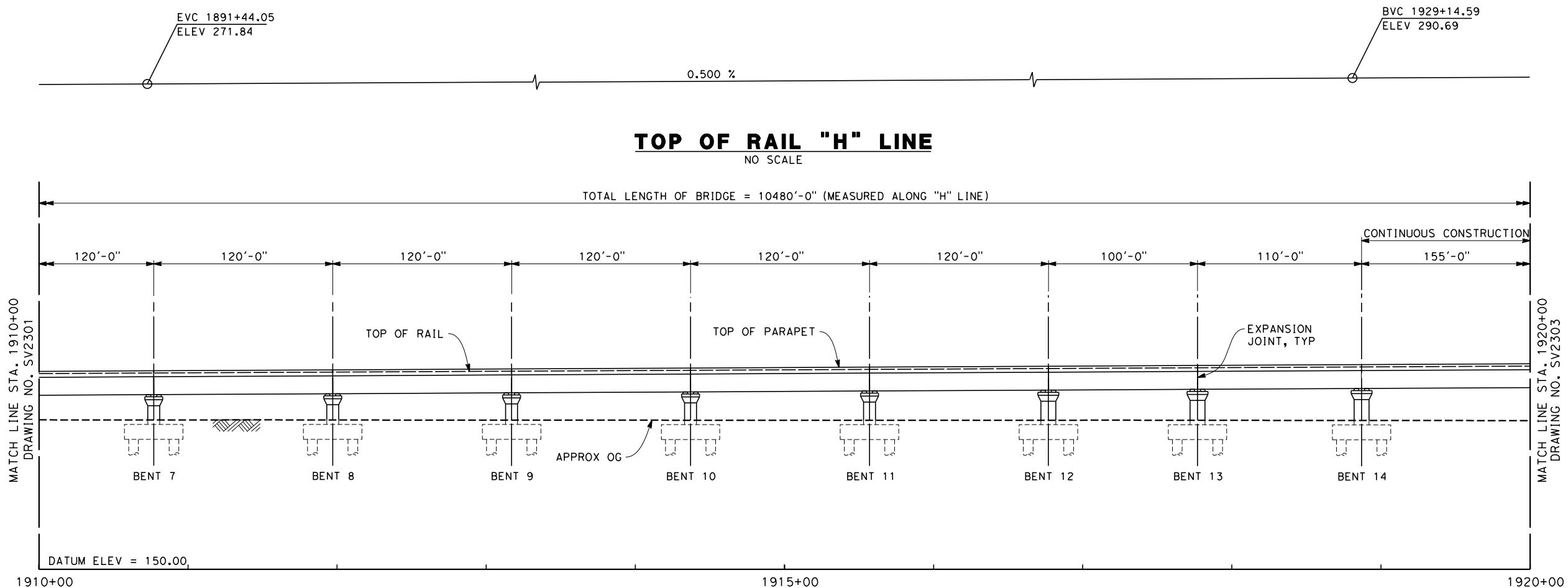
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
HANFORD VIADUCT  
KEY MAP

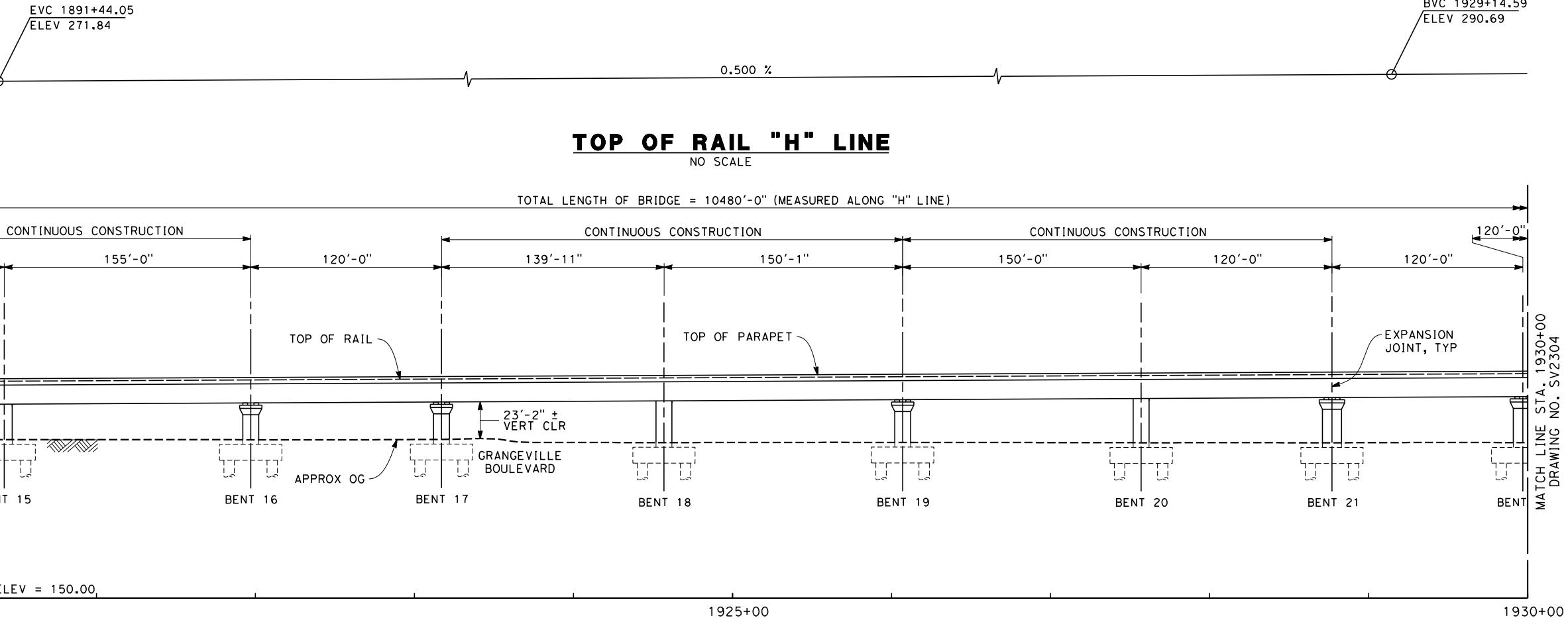
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2300  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 14



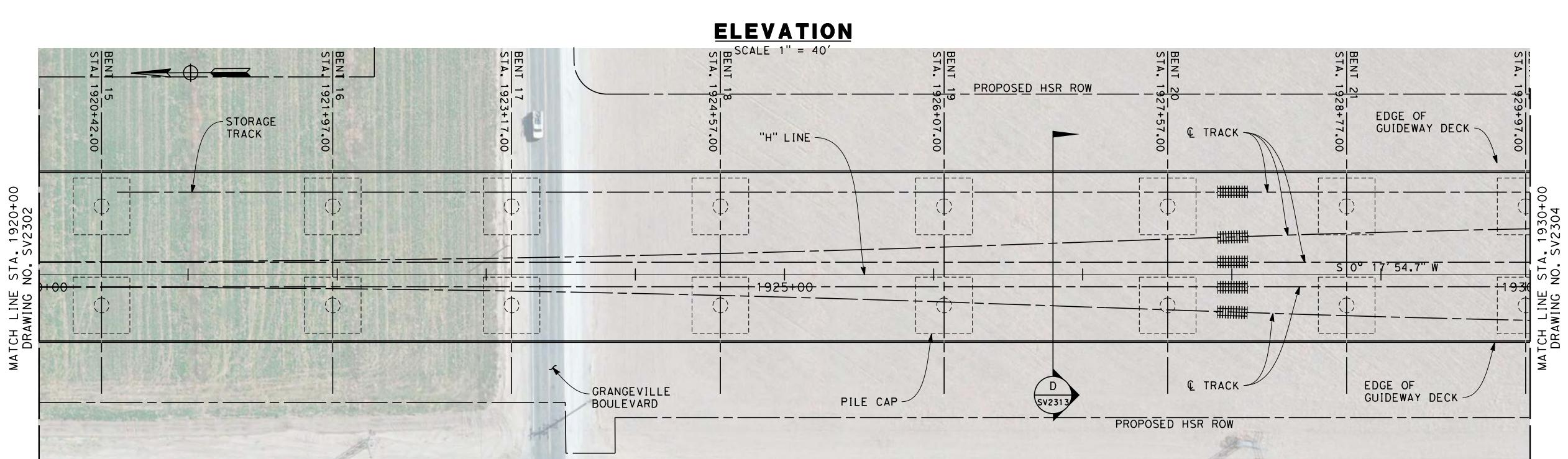
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DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-			HANFORD SUBSECTION	DRAWING NO. SV2301
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION			ALIGNMENT H	SCALE
IN CHARGE R. COFFIN				HANFORD VIADUCT	AS SHOWN
DATE 12/31/13				PLAN AND ELEVATION	SHEET NO. 2 OF 14
REV	DATE	BY	CHK	APP	
				DESCRIPTION	





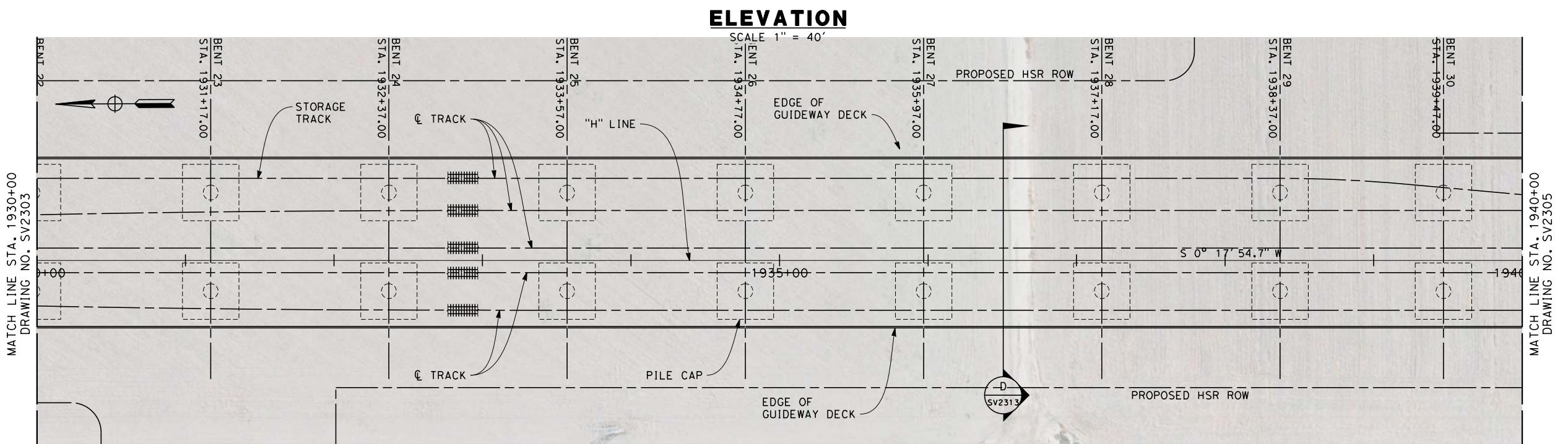
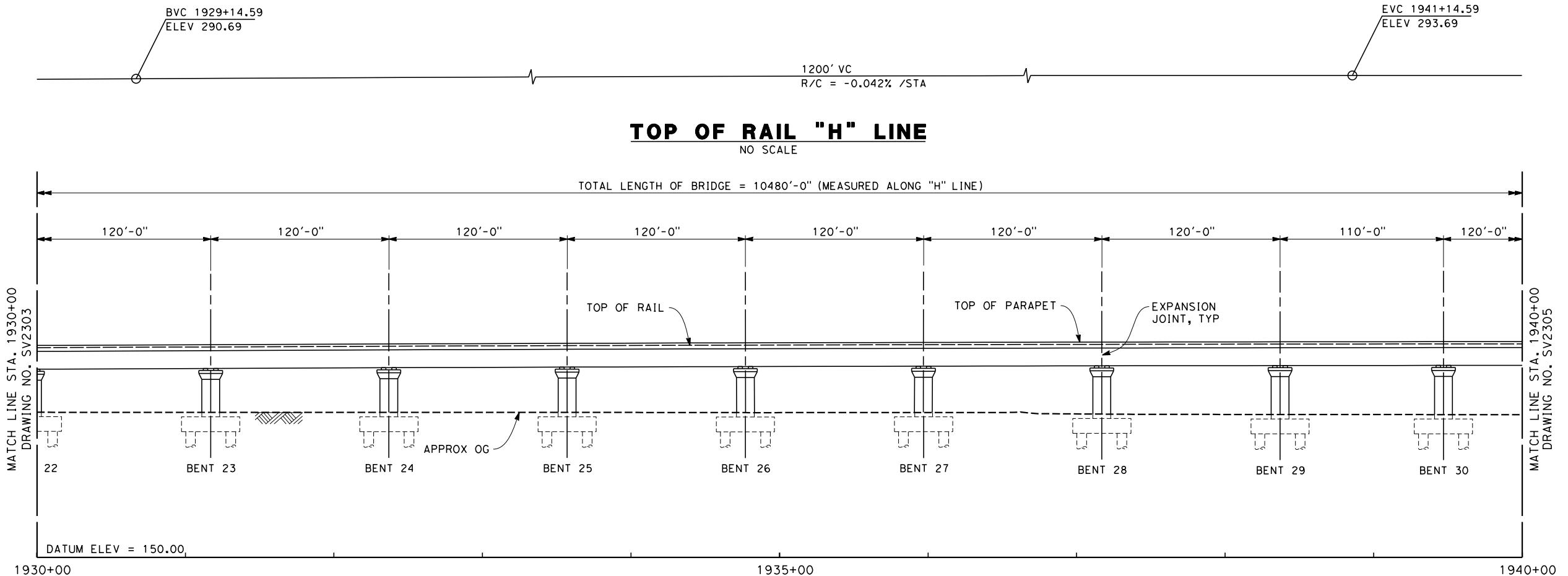
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80  
1"=40'

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION	DRAWING NO. SV2303
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	ALIGNMENT H	SCALE
IN CHARGE R. COFFIN			HANFORD VIADUCT	AS SHOWN
DATE 12/31/13			PLAN AND ELEVATION	SHEET NO. 4 OF 14
REV	DATE	BY	CHK	APP
			DESCRIPTION	

**PLAN**

SCALE 1" = 40'



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

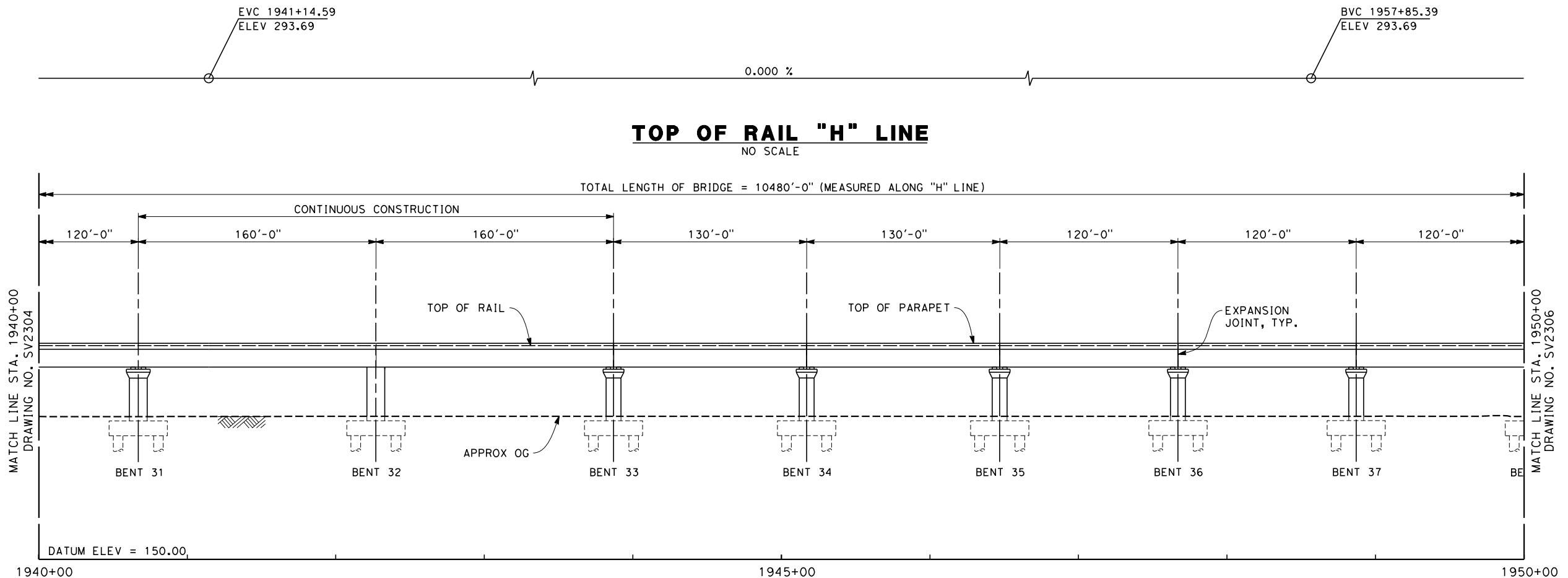
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

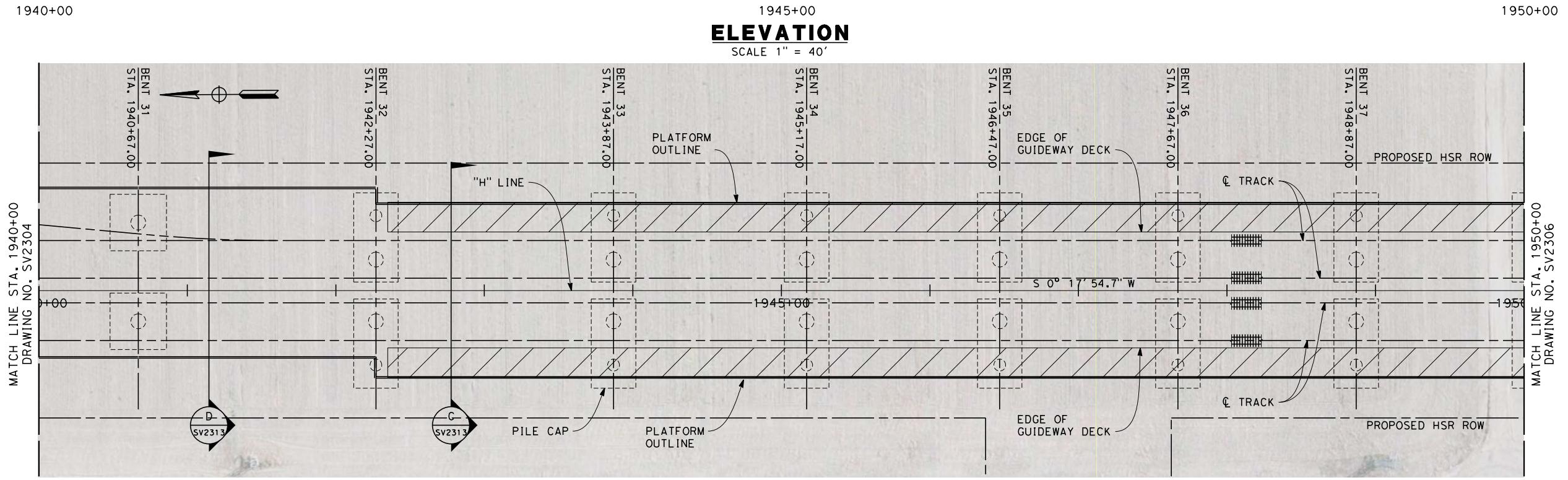


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
HANFORD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2304  
SCALE  
AS SHOWN  
SHEET NO.  
5 OF 14

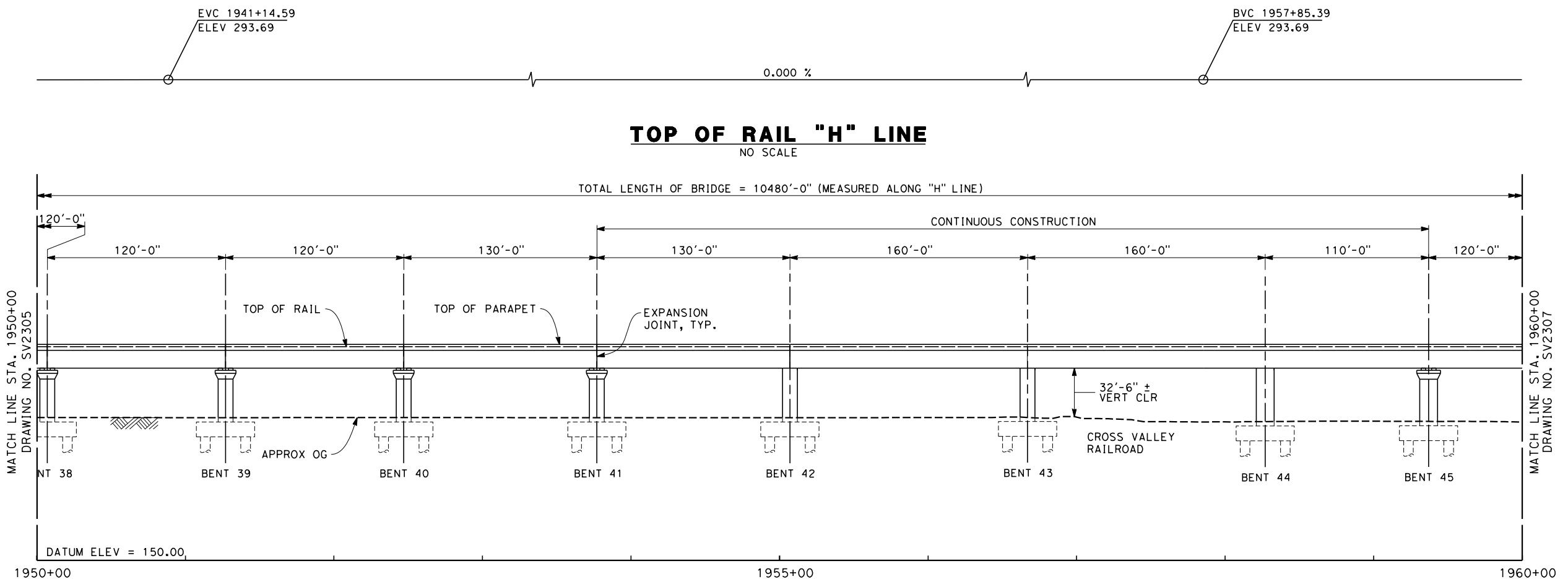


- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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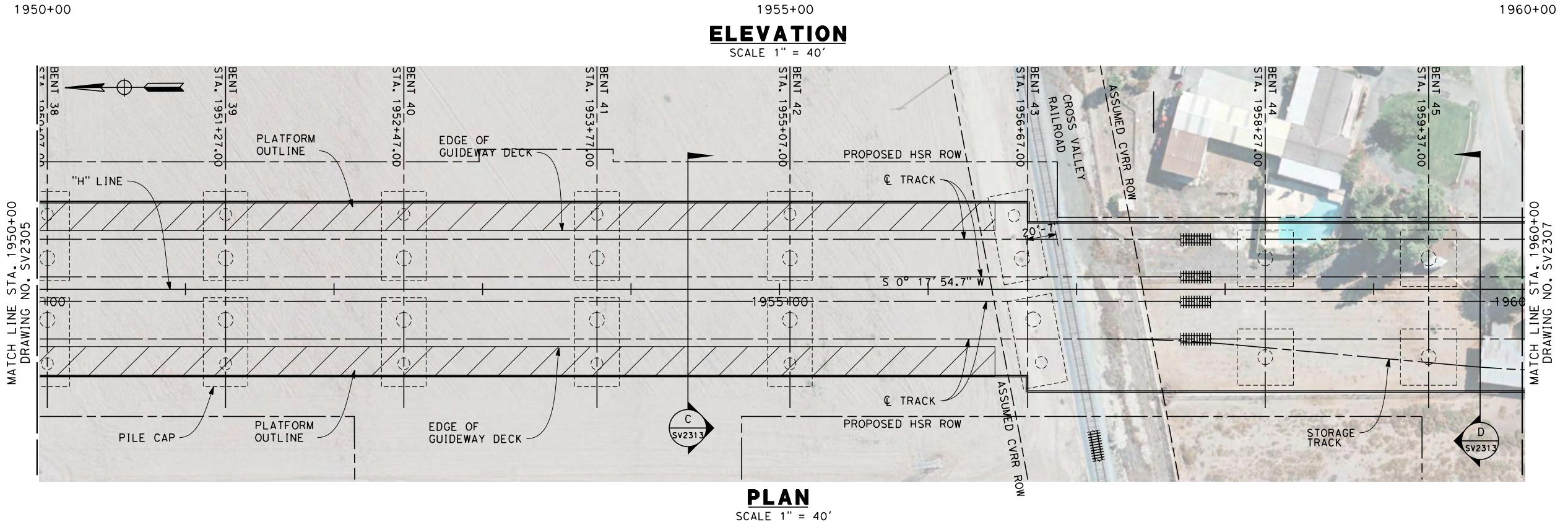


- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION	DRAWING NO. SV2305
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION		ALIGNMENT H	SCALE
IN CHARGE R. COFFIN			HANFORD VIADUCT	AS SHOWN
DATE 12/31/13			PLAN AND ELEVATION	SHEET NO. 6 OF 14
REV	DATE	BY	CHK	APP
			DESCRIPTION	

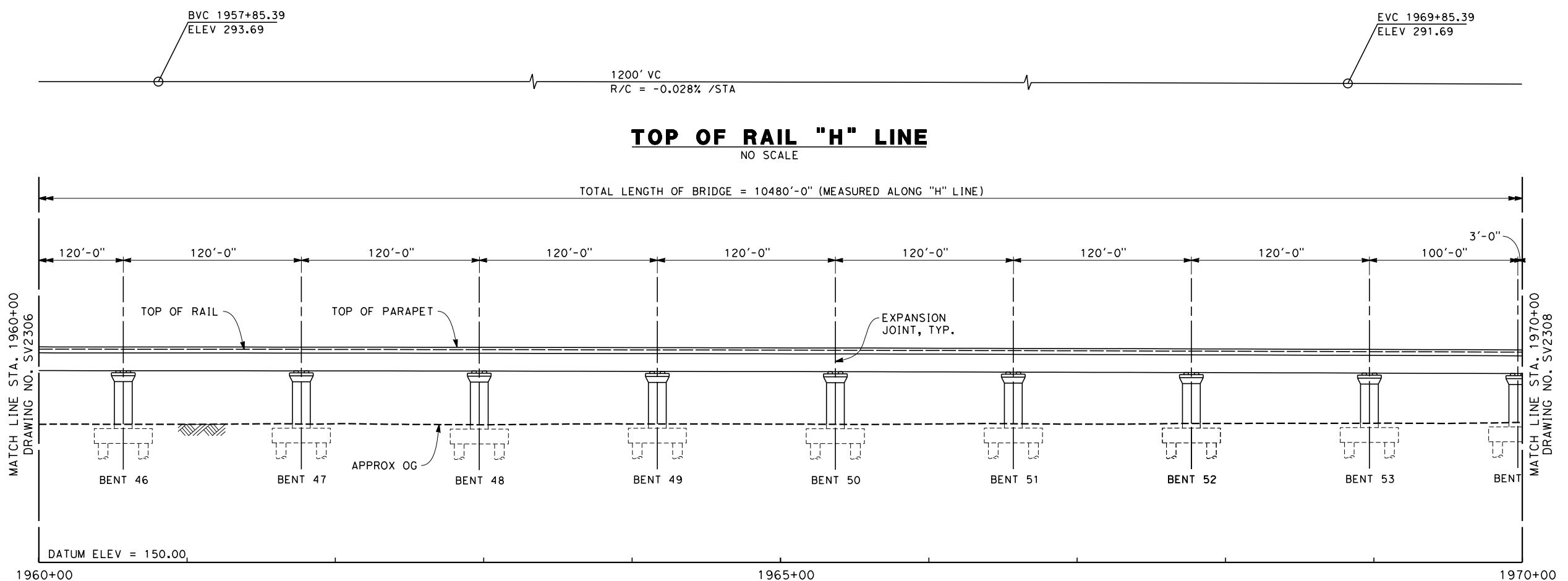


- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

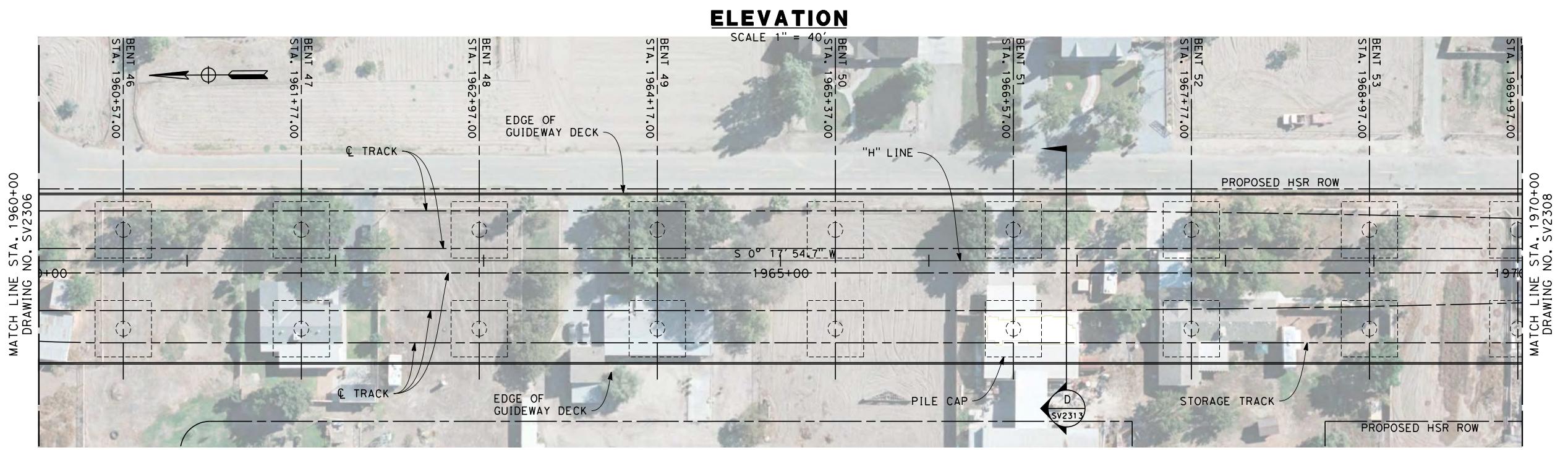


40 0 40 80  
1"=40'

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION	DRAWING NO. SV2306
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	ALIGNMENT H	SCALE AS SHOWN
IN CHARGE R. COFFIN			HANFORD VIADUCT	SHEET NO. 7 OF 14
DATE 12/31/13	DESCRIPTION 12/31/13		PLAN AND ELEVATION	

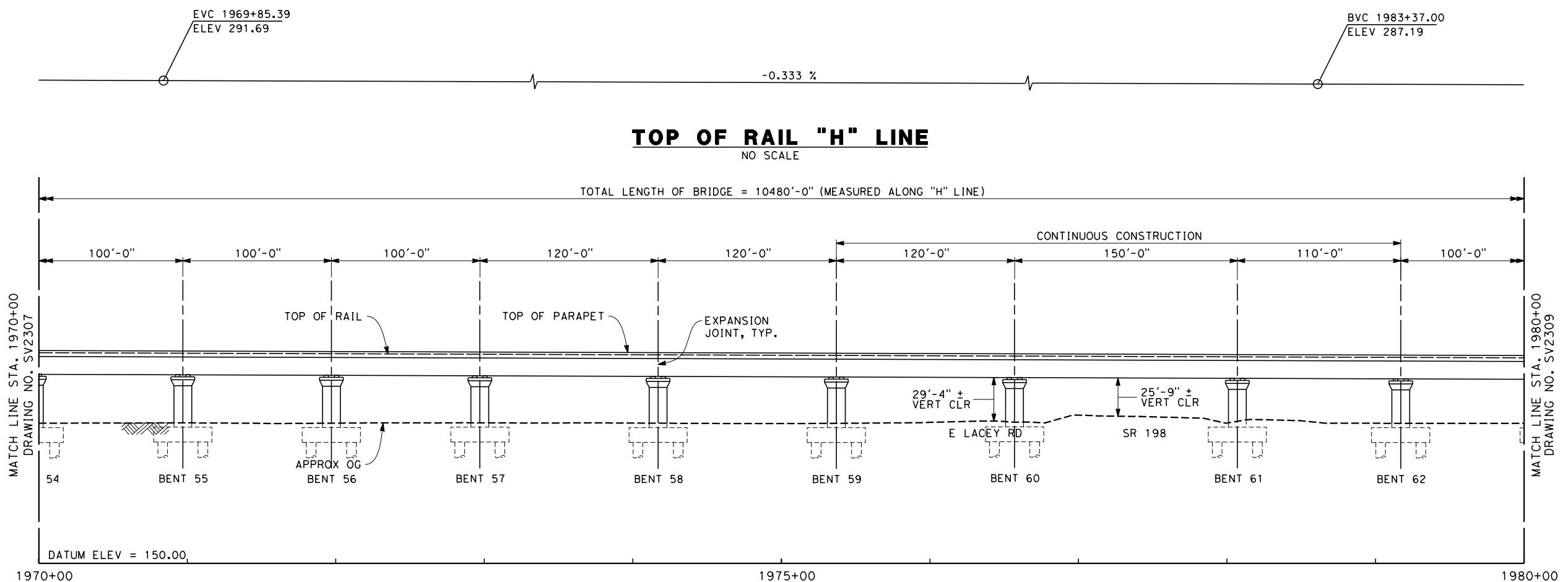


- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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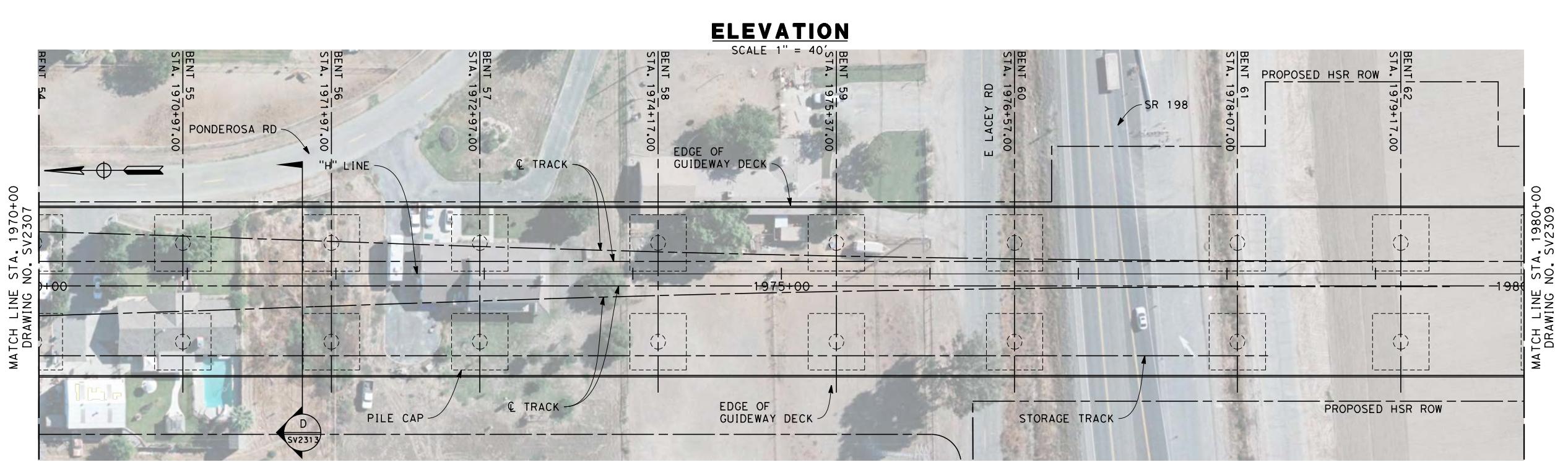


40 0 40 80  
1"=40'

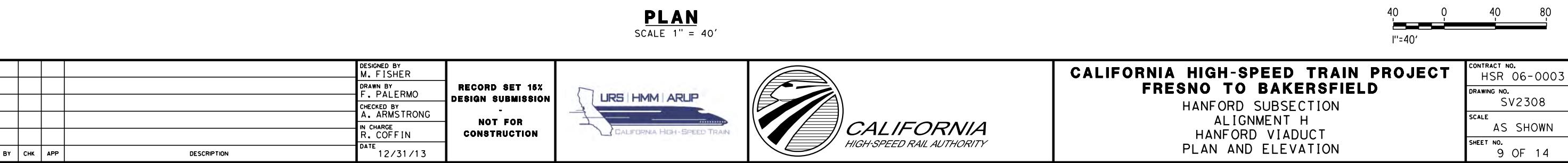
DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD SUBSECTION	DRAWING NO. SV2307
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION		ALIGNMENT H	SCALE
IN CHARGE R. COFFIN			HANFORD VIADUCT	AS SHOWN
DATE 12/31/13			PLAN AND ELEVATION	SHEET NO. 8 OF 14
REV	DATE	BY	CHK	APP
			DESCRIPTION	



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

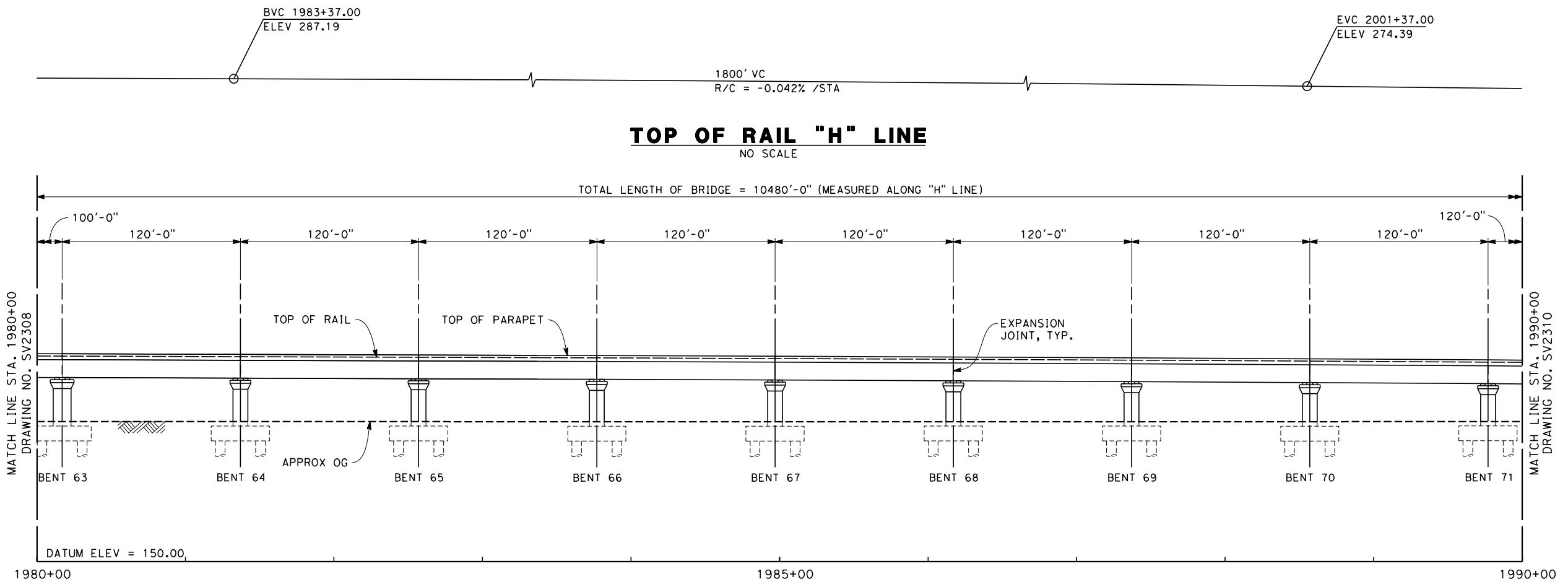
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



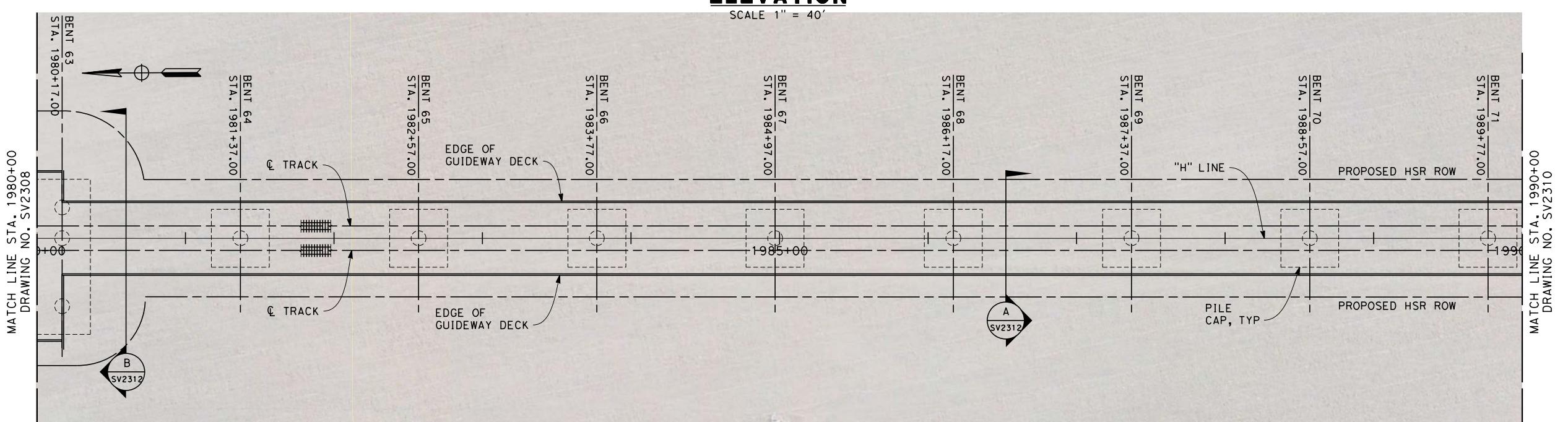
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
HANFORD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2308  
SCALE  
AS SHOWN  
SHEET NO.  
9 OF 14



NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**LEGEND:**

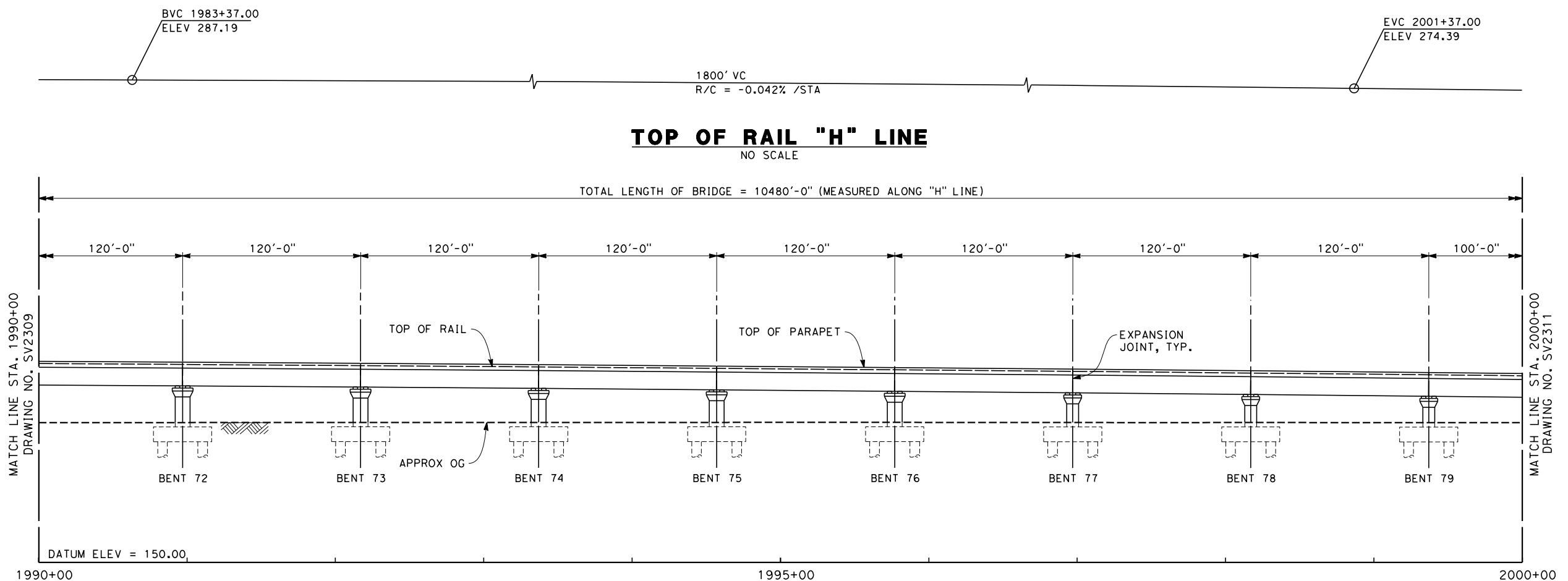
- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



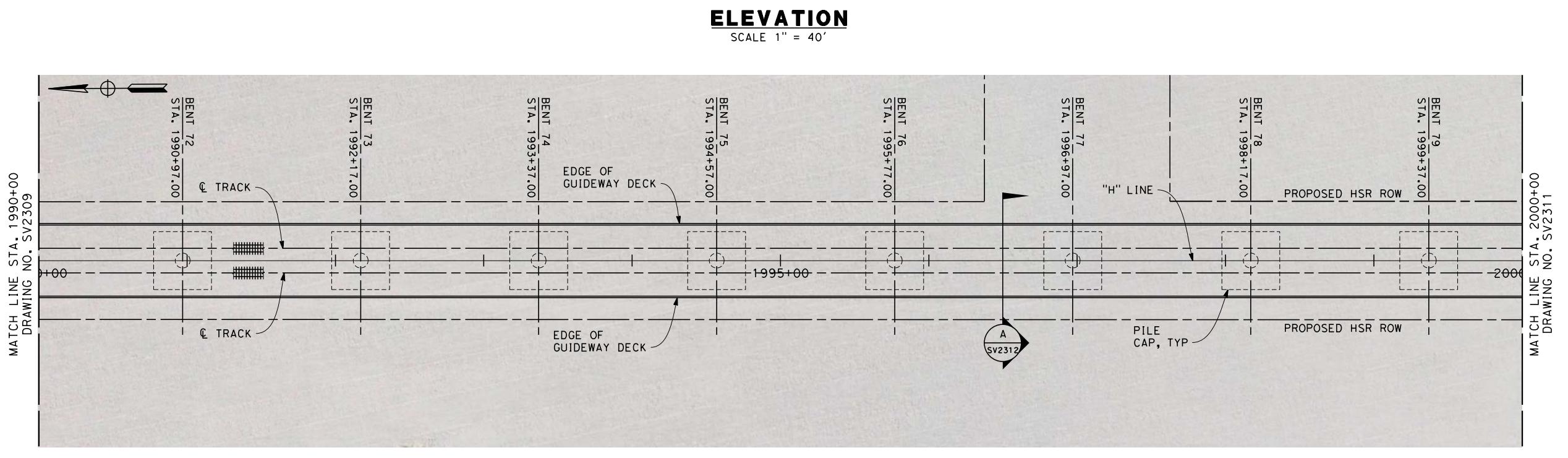
# CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION  
ALIGNMENT H  
HANFORD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2309  
SCALE  
AS SHOWN  
HEET NO.  
10 OF 14

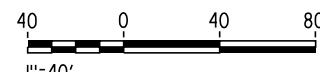


- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPN  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**PLAN**  
SCALE 1" = 40'



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

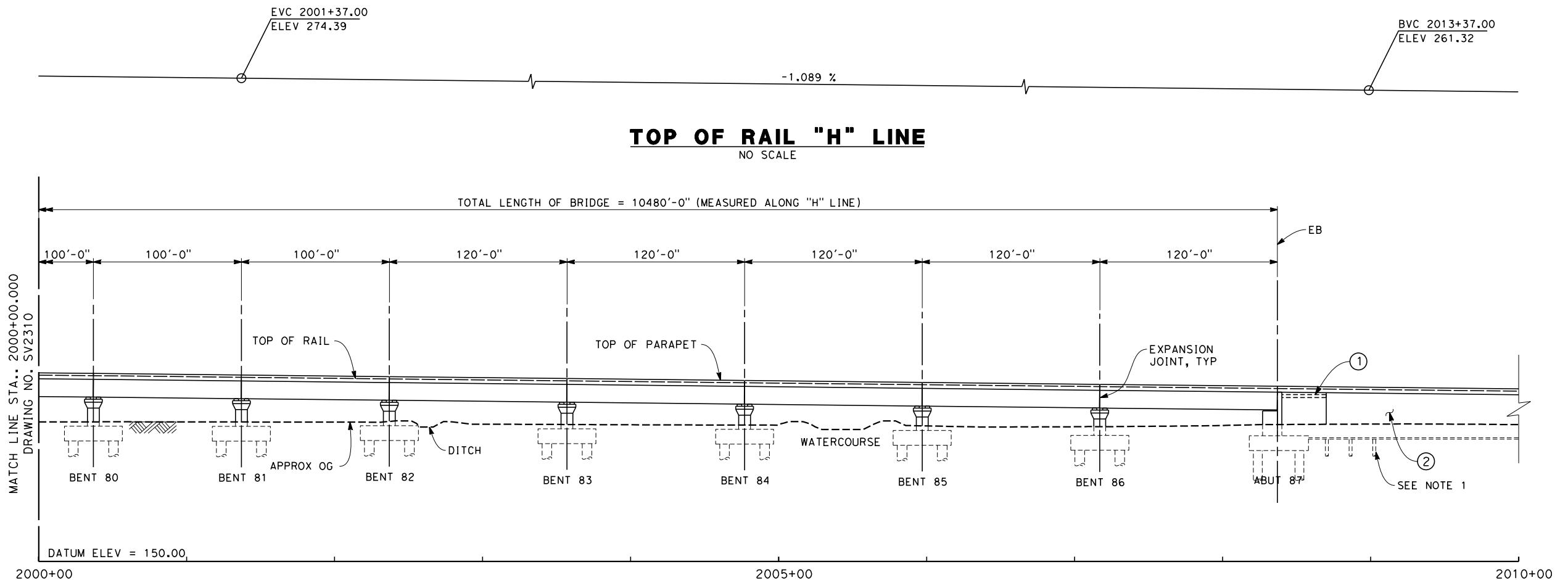
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

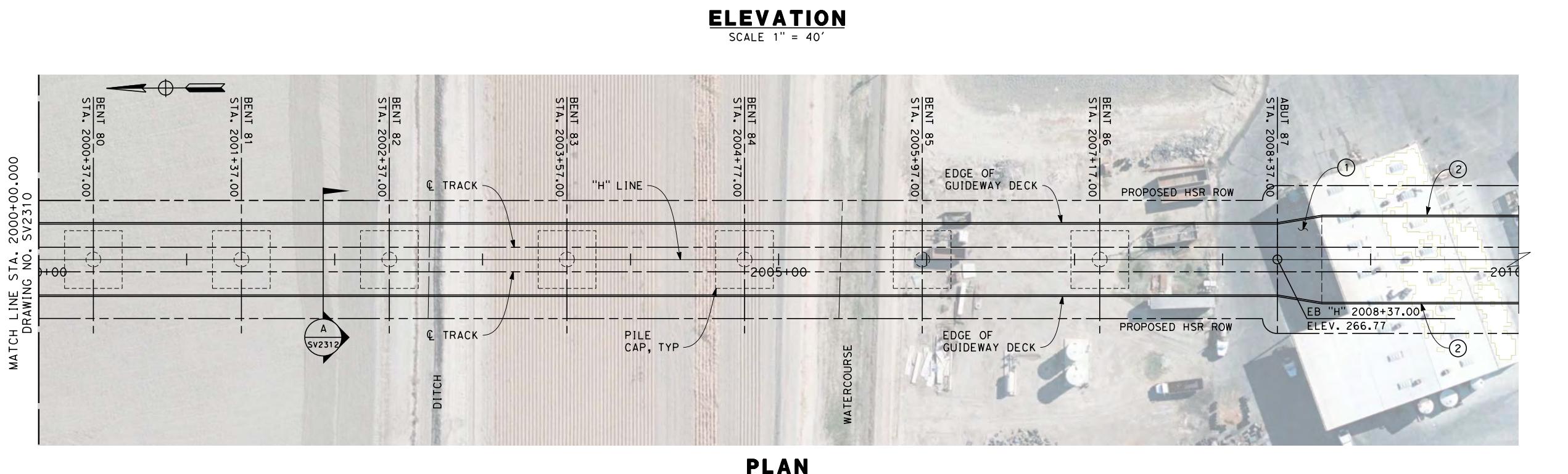


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
HANFORD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2310  
SCALE  
AS SHOWN  
SHEET NO.  
11 OF 14



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPMS  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



40 0 40 80  
1"=40'

REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

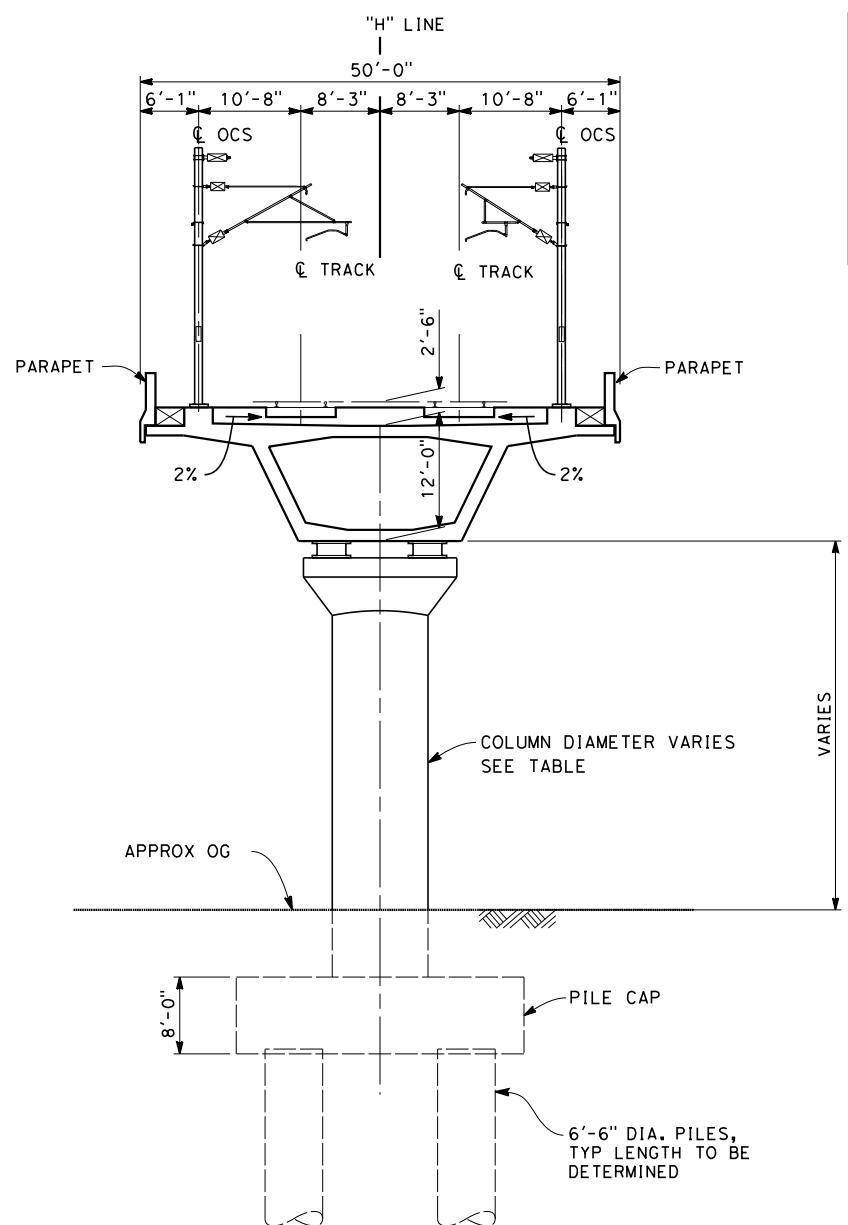
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD SUBSECTION  
ALIGNMENT H  
HANFORD VIADUCT  
PLAN AND ELEVATION

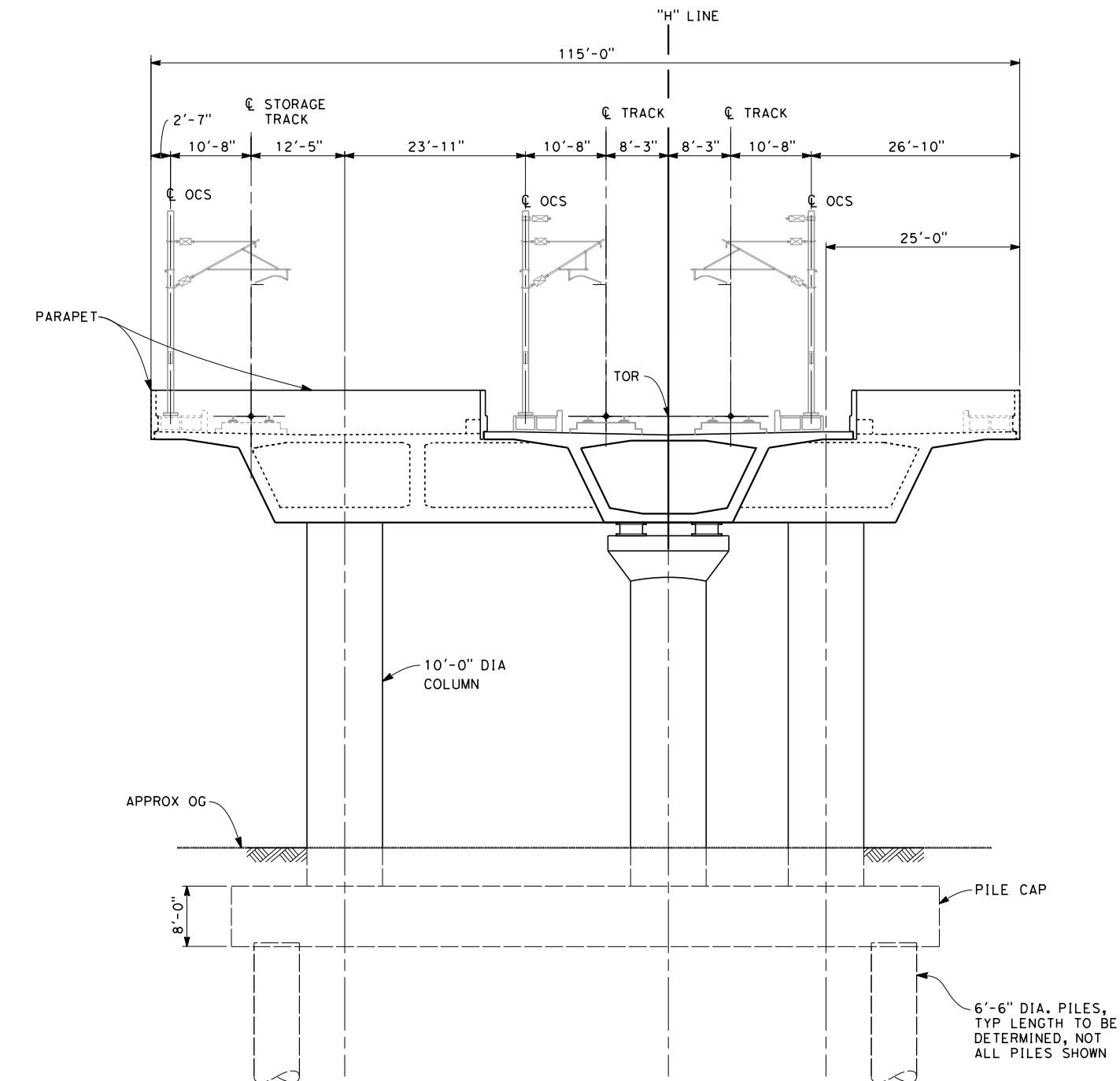
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2311  
SCALE  
AS SHOWN  
SHEET NO.  
12 OF 14



### SECTION A

SCALE: 1" = 10'

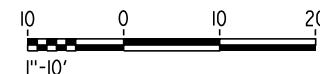
STA 1903+57 THROUGH 1918+87  
STA 1980+17 THROUGH 2008+37



### SECTION B

SCALE: 1" = 10'

STA 1918+87 (BENT 14)  
STA 1980+17 (BENT 61)

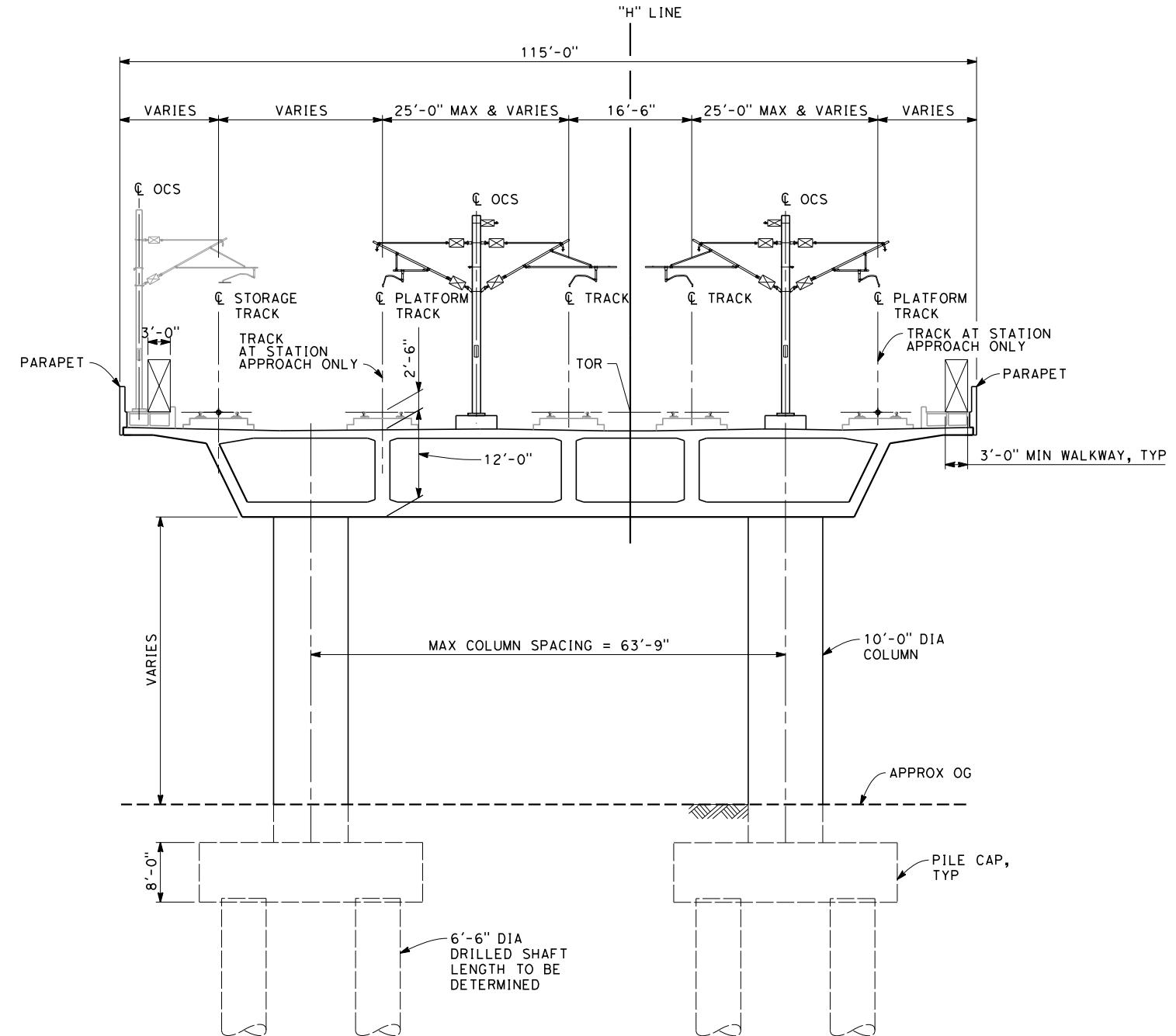
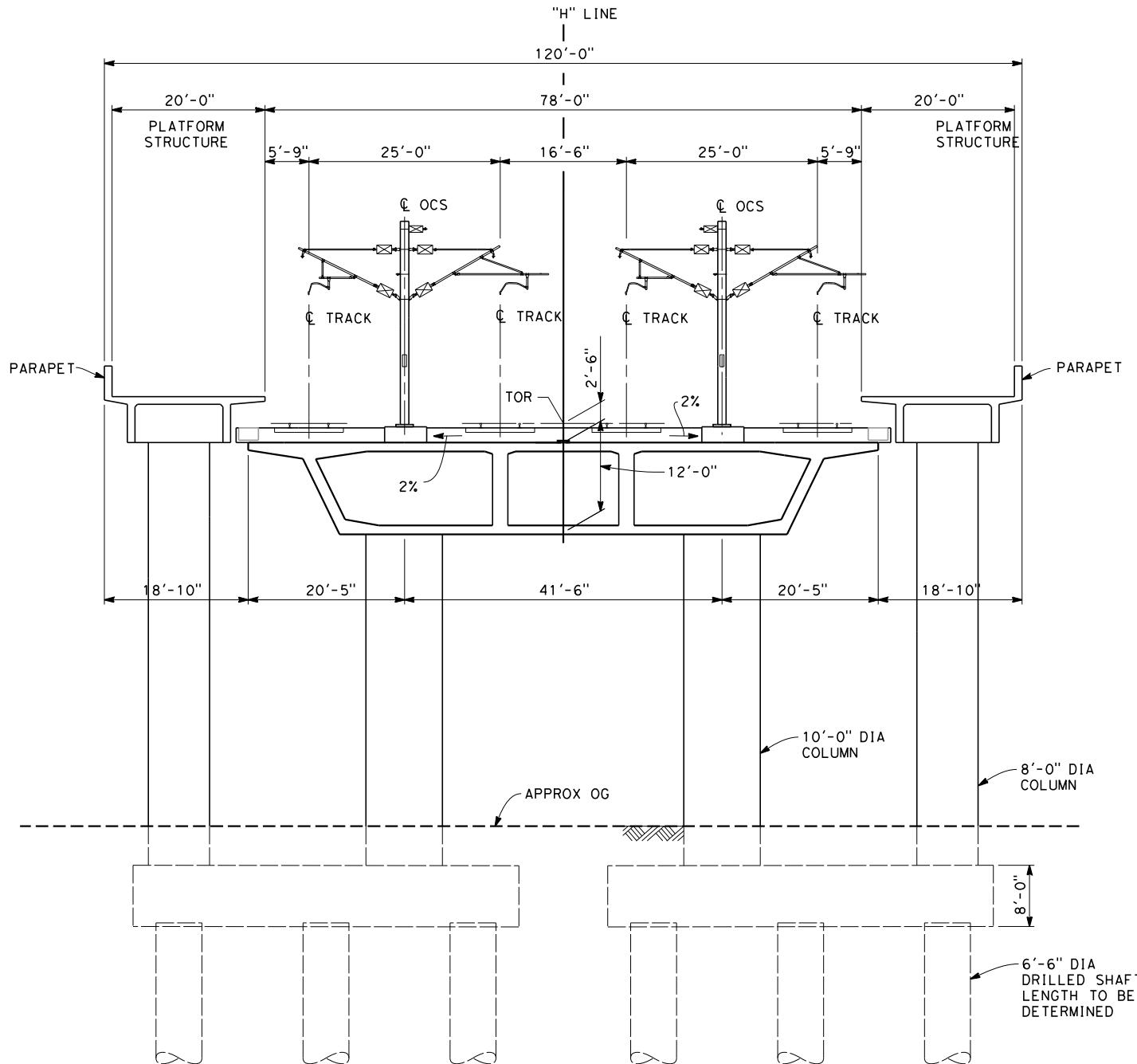


DESIGNED BY Y. REN	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	CALIFORNIA HIGH-SPEED RAIL AUTHORITY
IN CHARGE R. COFFIN		
DATE 12/31/13		

DESCRIPTION

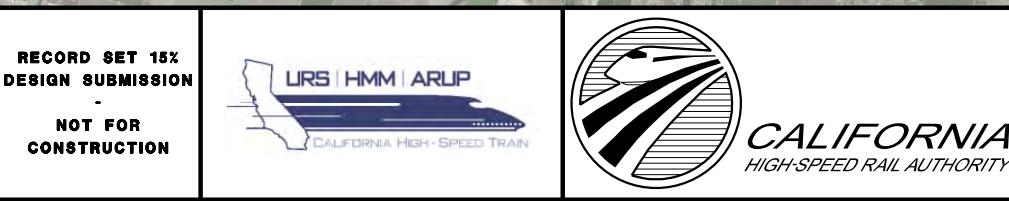
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2312
SCALE AS SHOWN
SHEET NO. 13 OF 14

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD  
HANFORD SUBSECTION  
ALIGNMENT H  
HANFORD VIADUCT  
TYPICAL SECTIONS



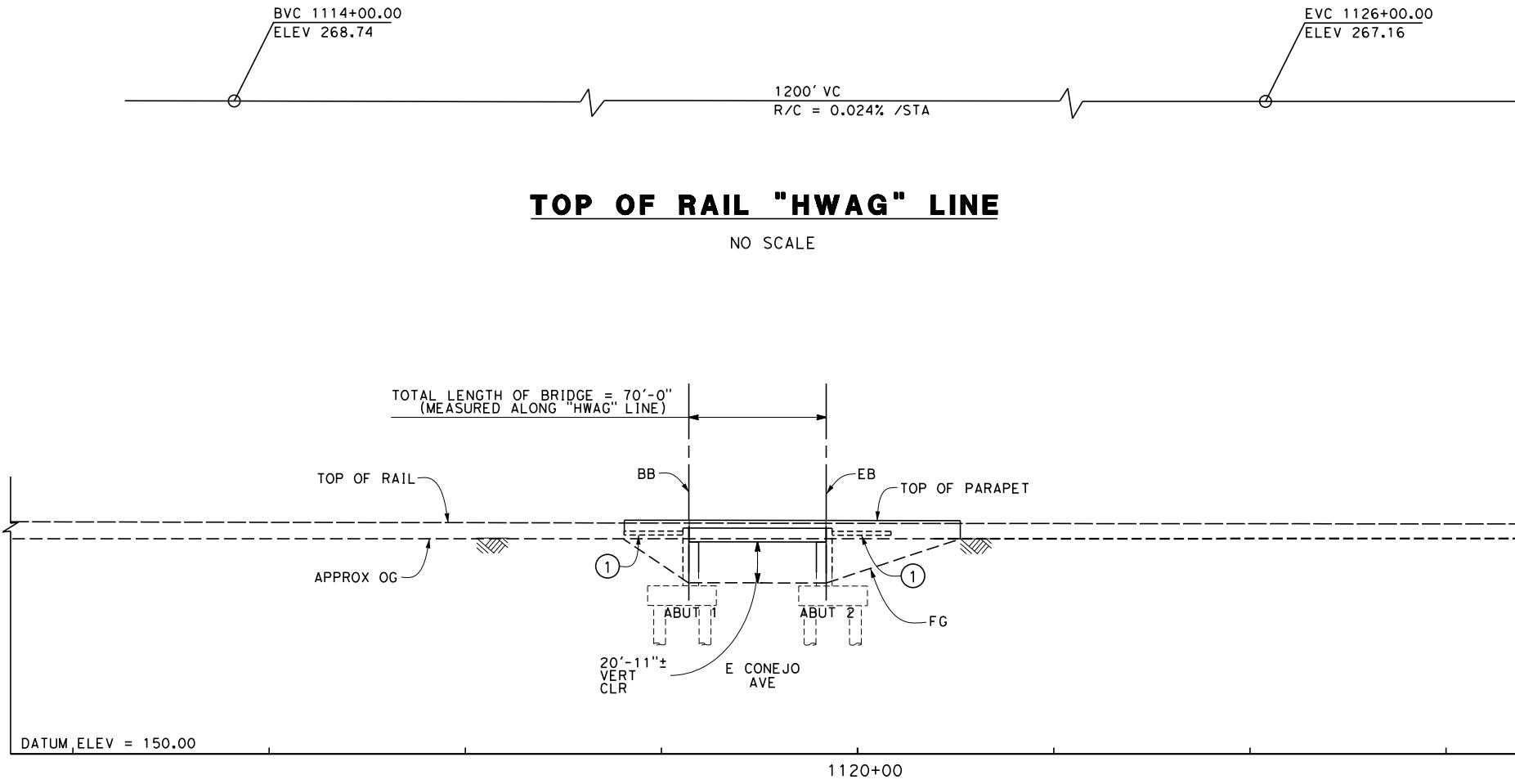


DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY J. VALENZUELA	-	CALIFORNIA HIGH-SPEED TRAIN
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		
REV DATE BY CHK APP	DESCRIPTION	



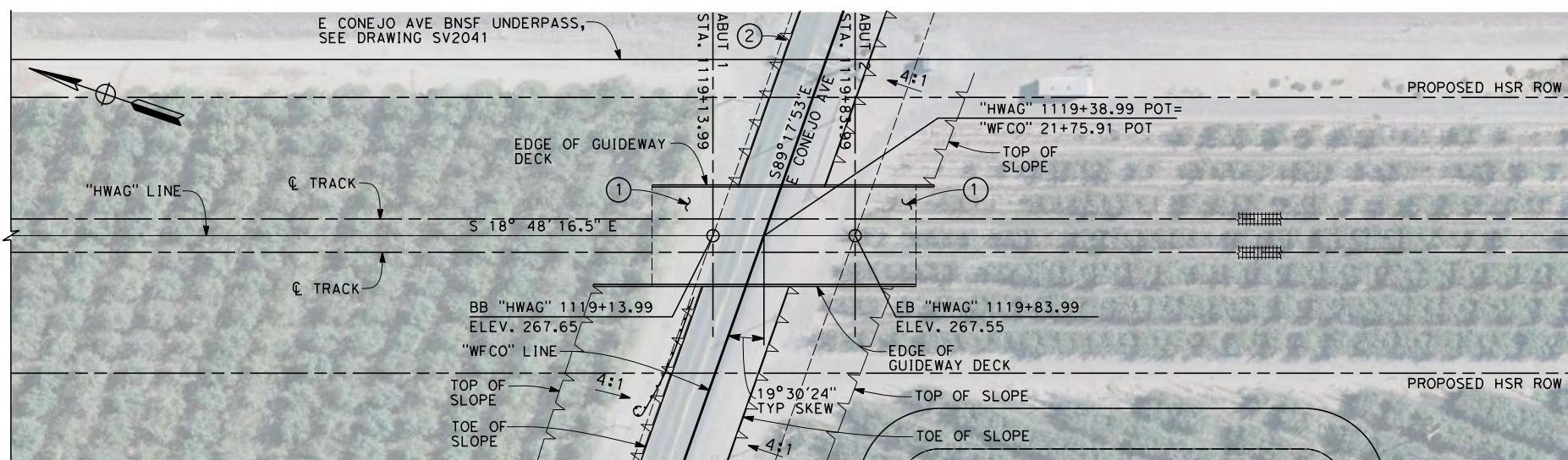
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
E CONEJO AVE HST UNDERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2010  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



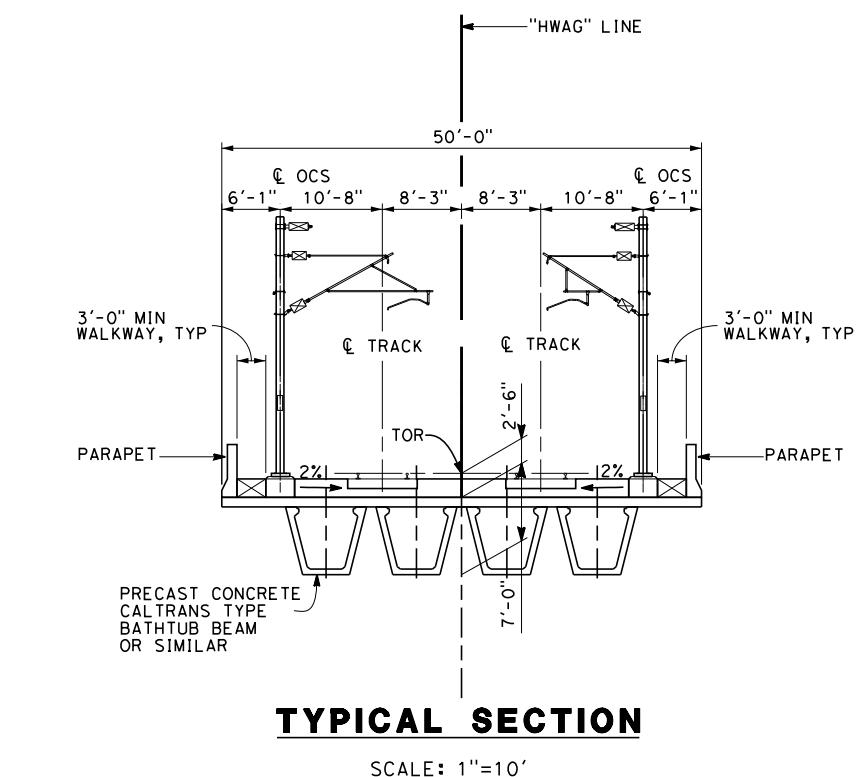
### ELEVATION

SCALE: 1"=40'



### PLAN

SCALE: 1"=40'



#### NOTES:

1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.

#### LEGEND:

- (1) STRUCTURE APPROACH SLAB
- (2) RETAINING WALLS
- ||||| INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD HANFORD WEST BYPASS SUBSECTION ALIGNMENT HW (AT-GRADE) E CONEJO AVE HST UNDERPASS PLAN AND ELEVATION	CONTRACT NO. HSR 06-003
DRAWN BY J. VALENZUELA	-				DRAWING NO. SV2011
CHECKED BY A. ARMSTRONG	-				SCALE AS SHOWN
IN CHARGE R. COFFIN	NOT FOR CONSTRUCTION				SHEET NO. 2 OF 2
DATE 12/31/13	DATE 12/31/13				
REV	DATE	BY	CHK	APP	DESCRIPTION



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY J. VALENZUELA	-	CALIFORNIA HIGH-SPEED TRAIN
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		

REV

DATE

BY

CHK

APP

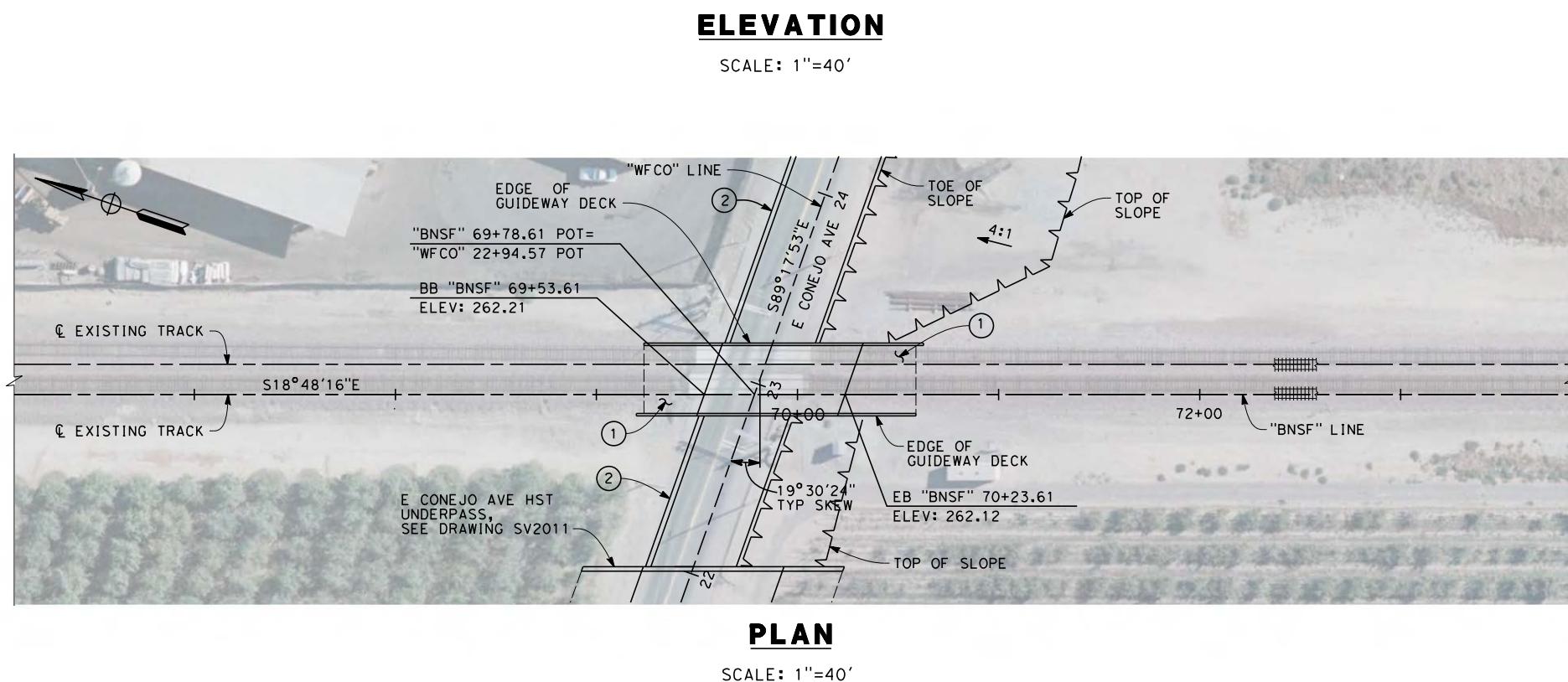
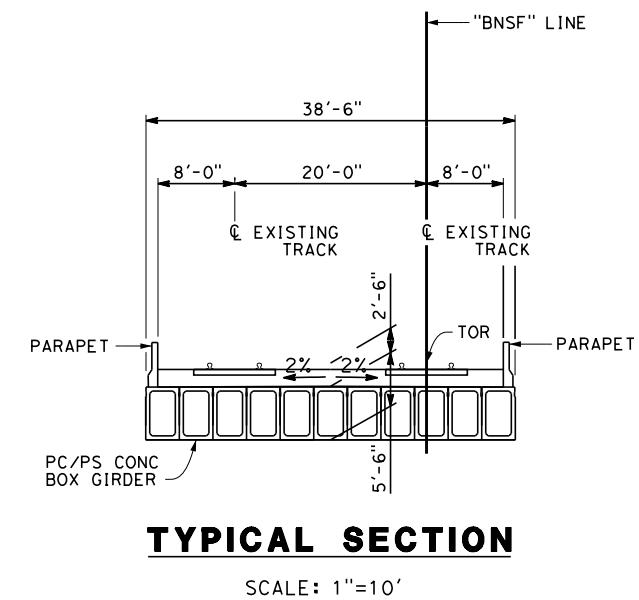
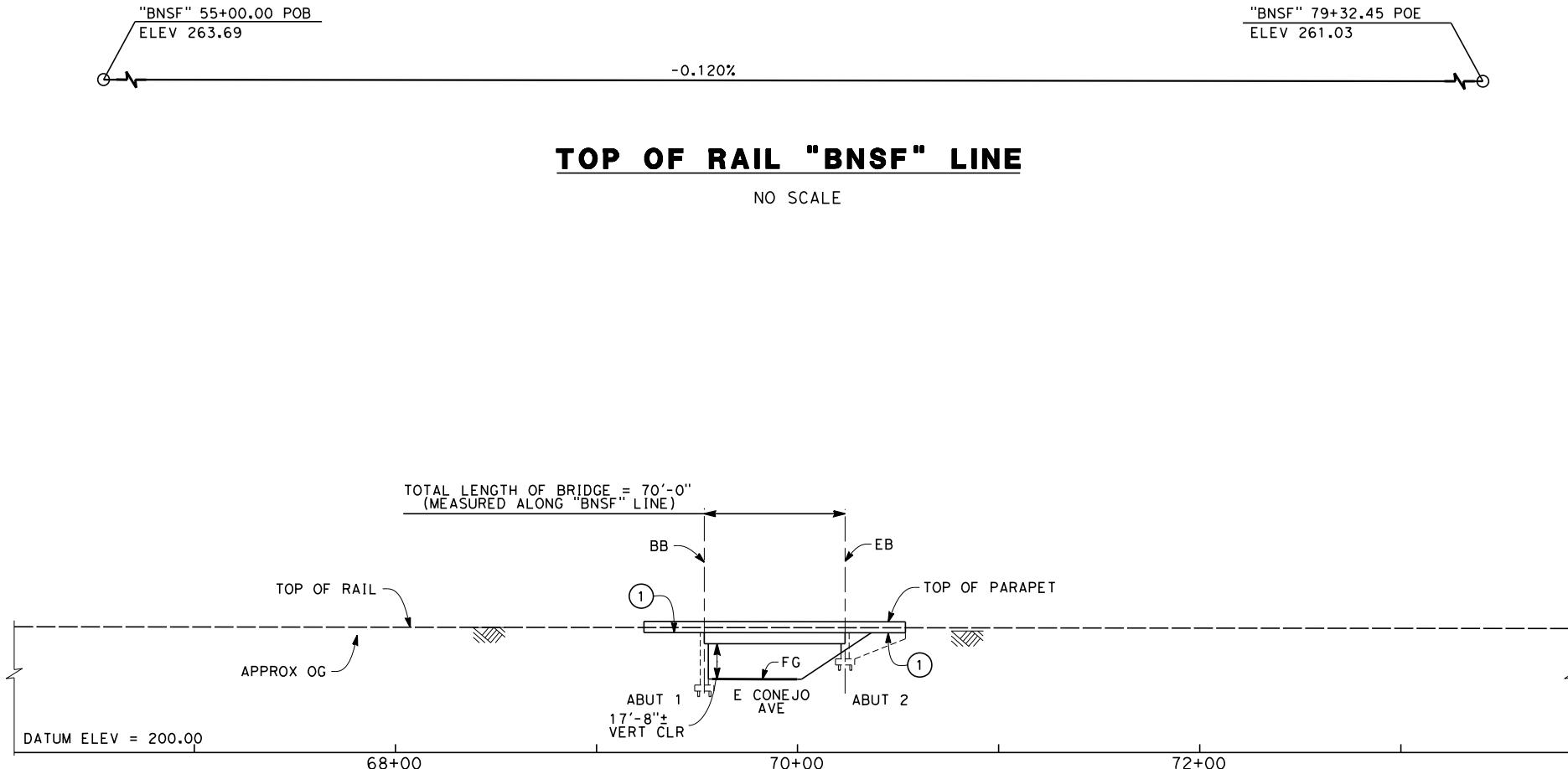
DESCRIPTION

12/31/13



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
E CONEJO AVE BNSF UNDERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2040  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



REV	DATE	BY	CHK	APP	DESCRIPTION	DESIGNED BY M. FISHER	DRAWN BY J. VALENZUELA	CHECKED BY A. ARMSTRONG	IN CHARGE R. COFFIN	RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION	
											DATE 12/31/13



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
E CONEJO AVE BNSF UNDERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2041  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 2



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/13/13

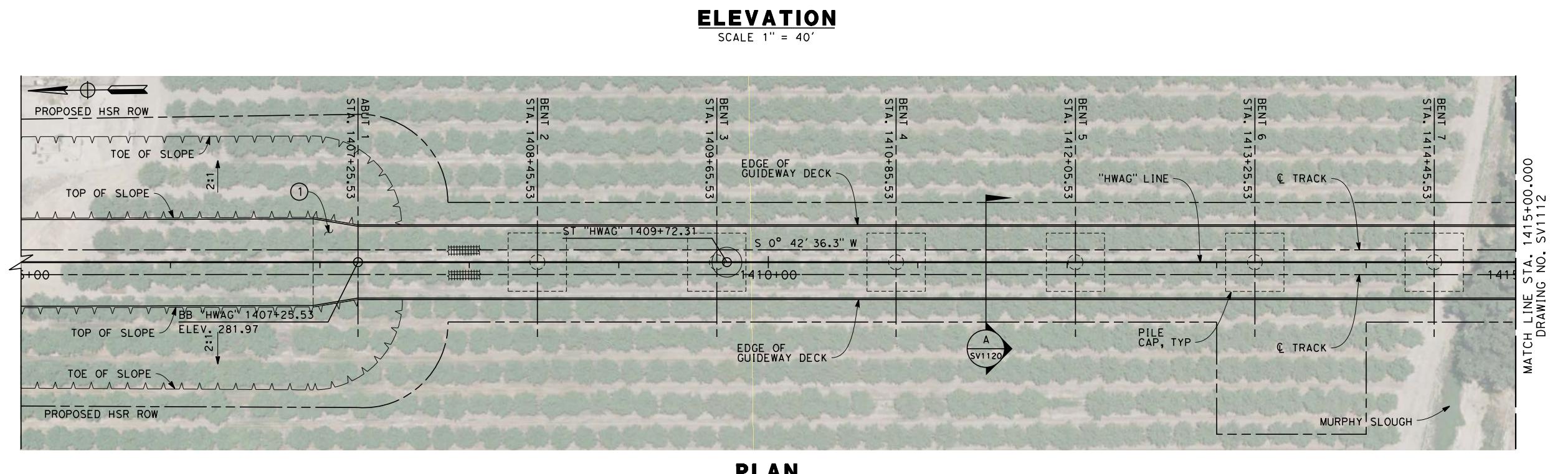
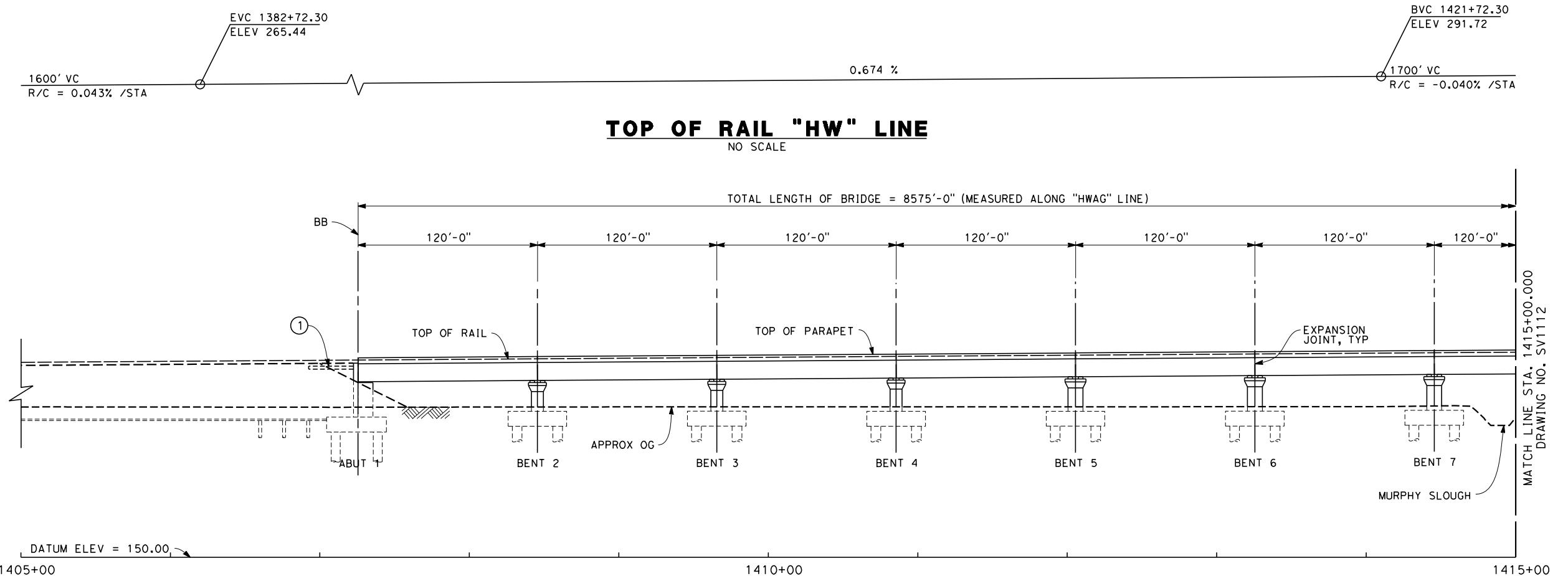
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



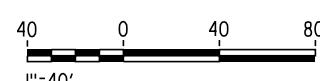
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1110  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 11



**PLAN**

SCALE 1" = 40'



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

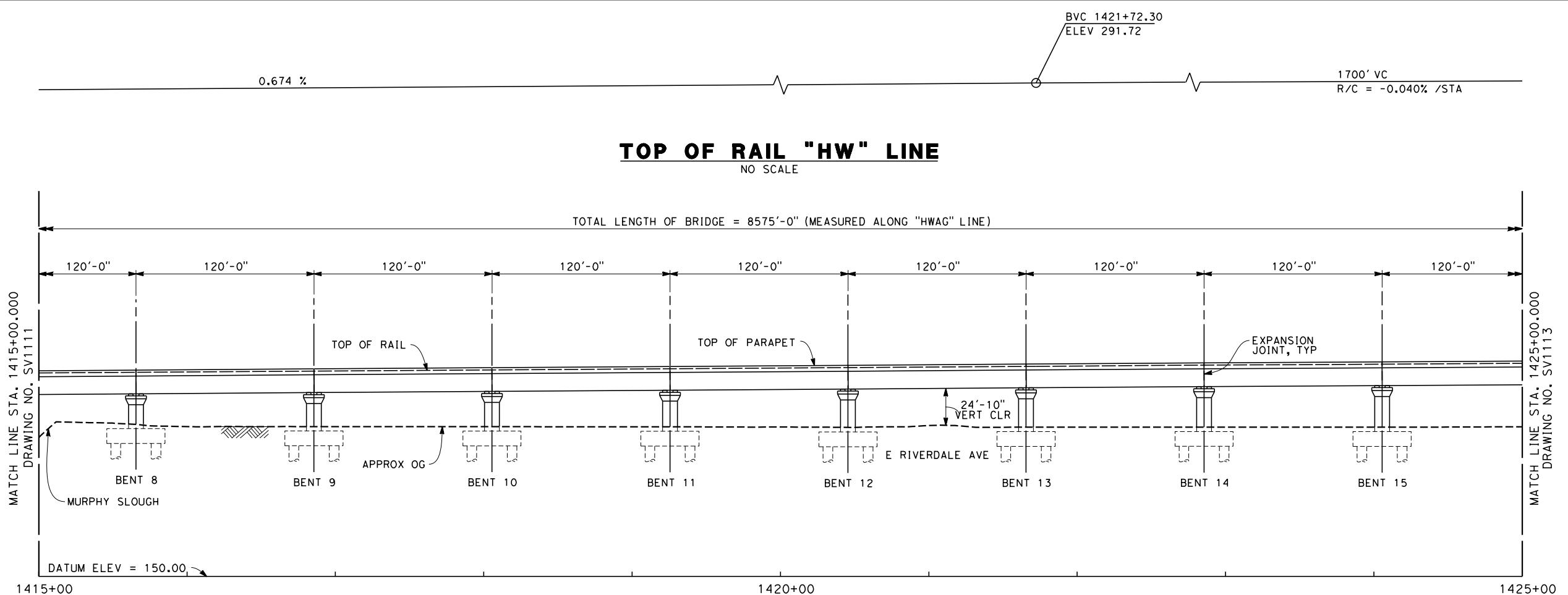
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

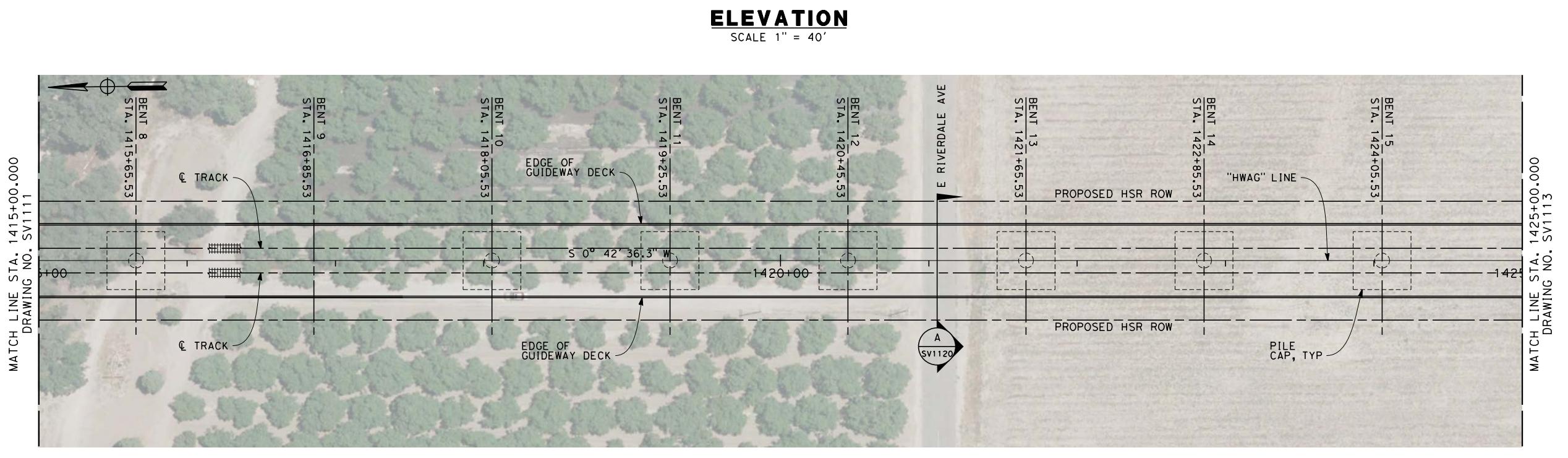


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1111  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 11

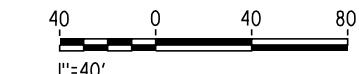


- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPN  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**PLAN**  
SCALE 1" = 40'



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

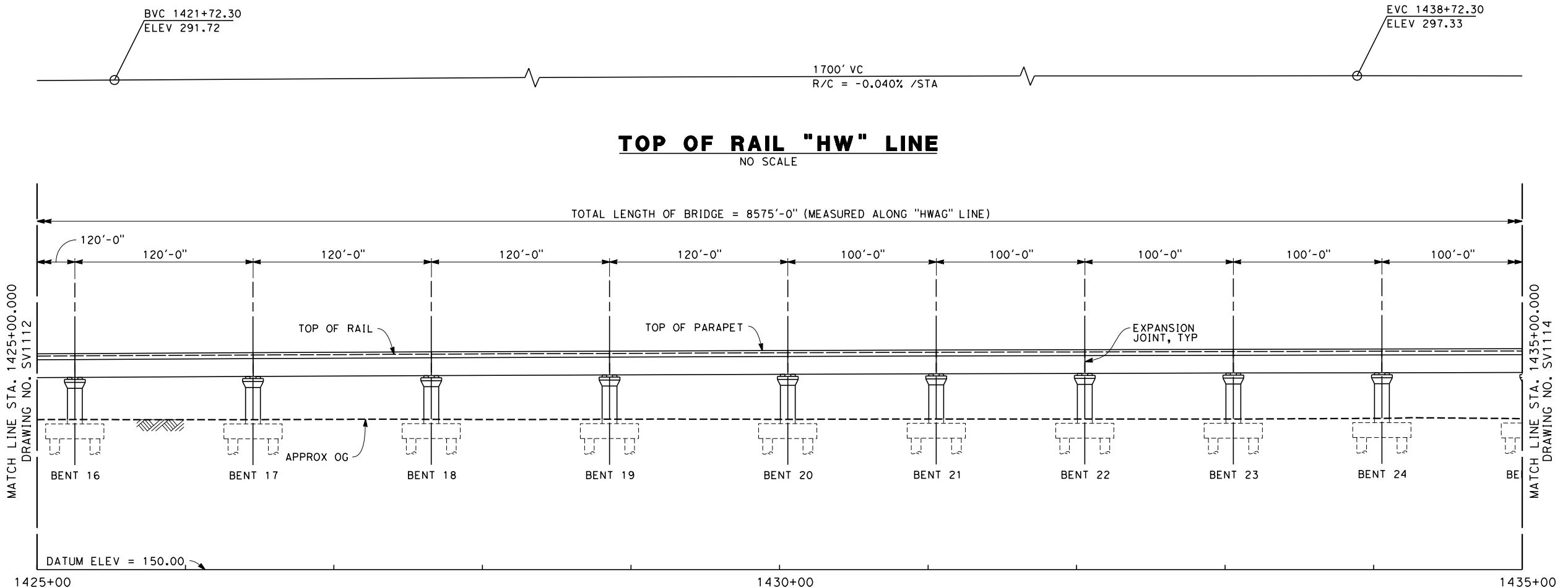
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

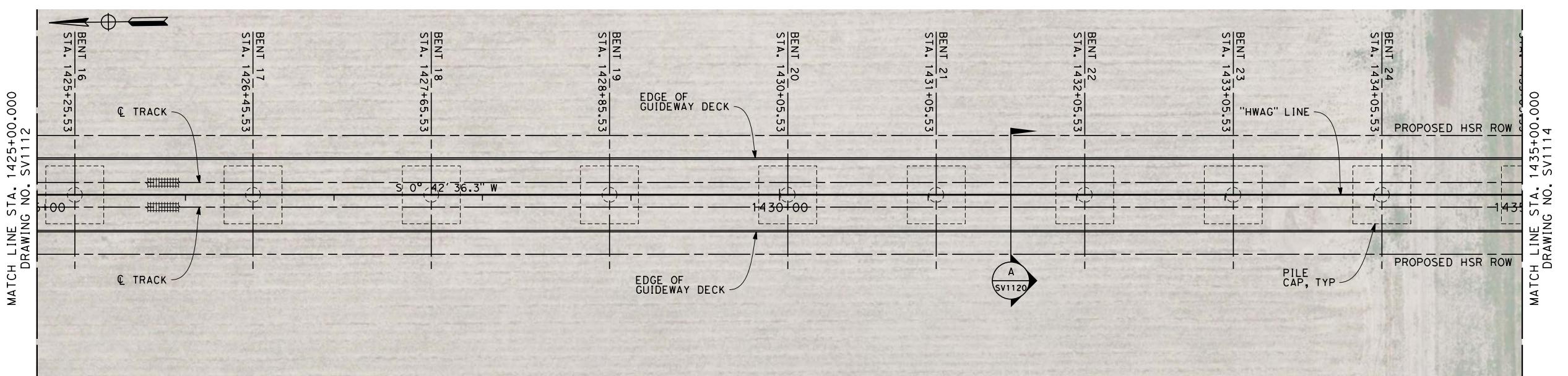
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1112  
SCALE  
AS SHOWN  
SHEET NO.  
3 OF 11



- NOT ALL PILES SHOWN
- PILE LENGTH TO BE DETERMINED
- SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPML  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
- UTILITY LOCATIONS TO BE DETERMINED
- ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

## **ELEVATION**

SCALE 1" = 40'



**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

## **PLAN**

SCALE 1" = 40'



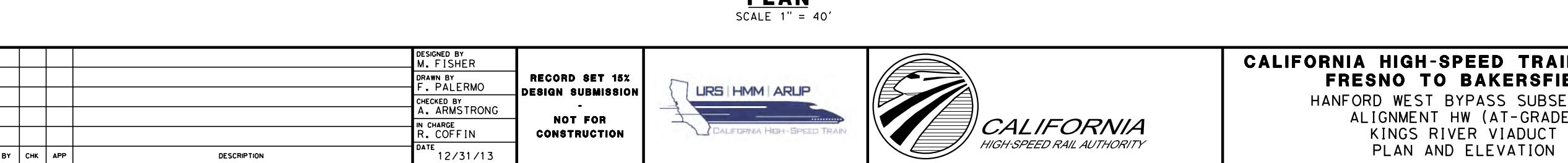
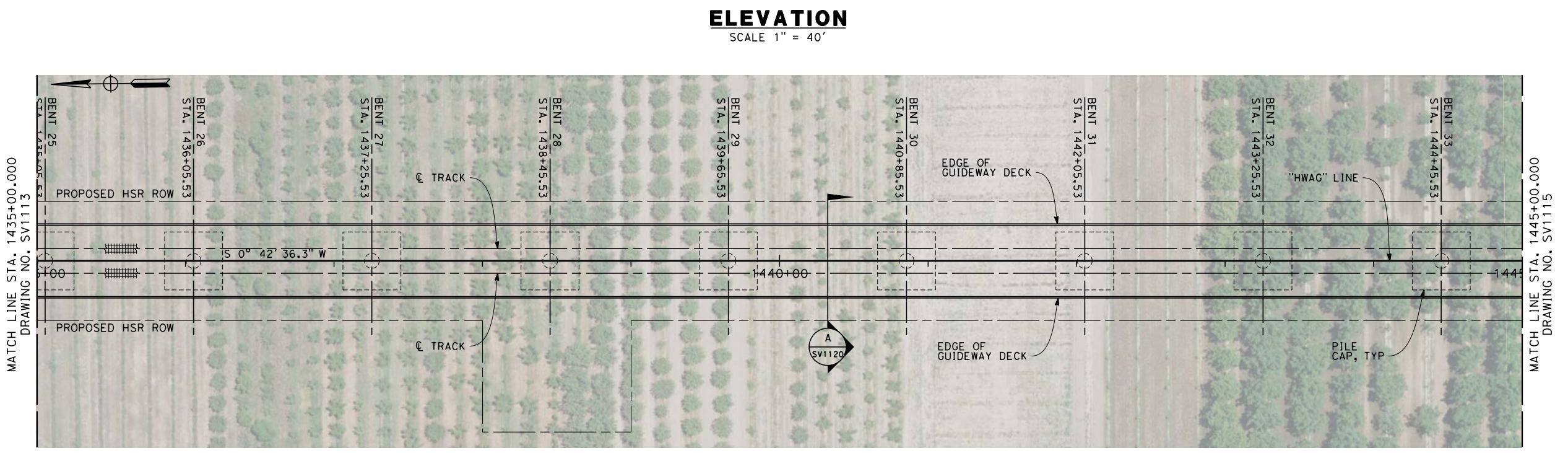
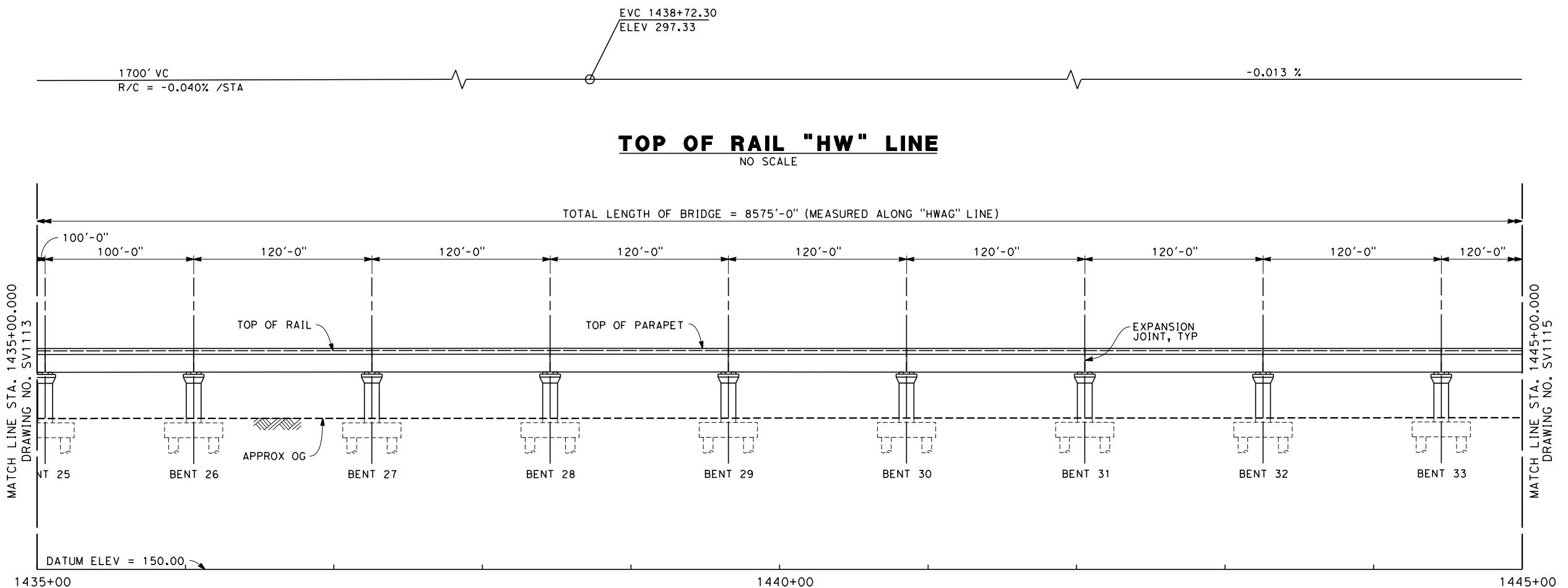
CALIFORNIA HIGH-SPEED TRAIN PROJECT

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

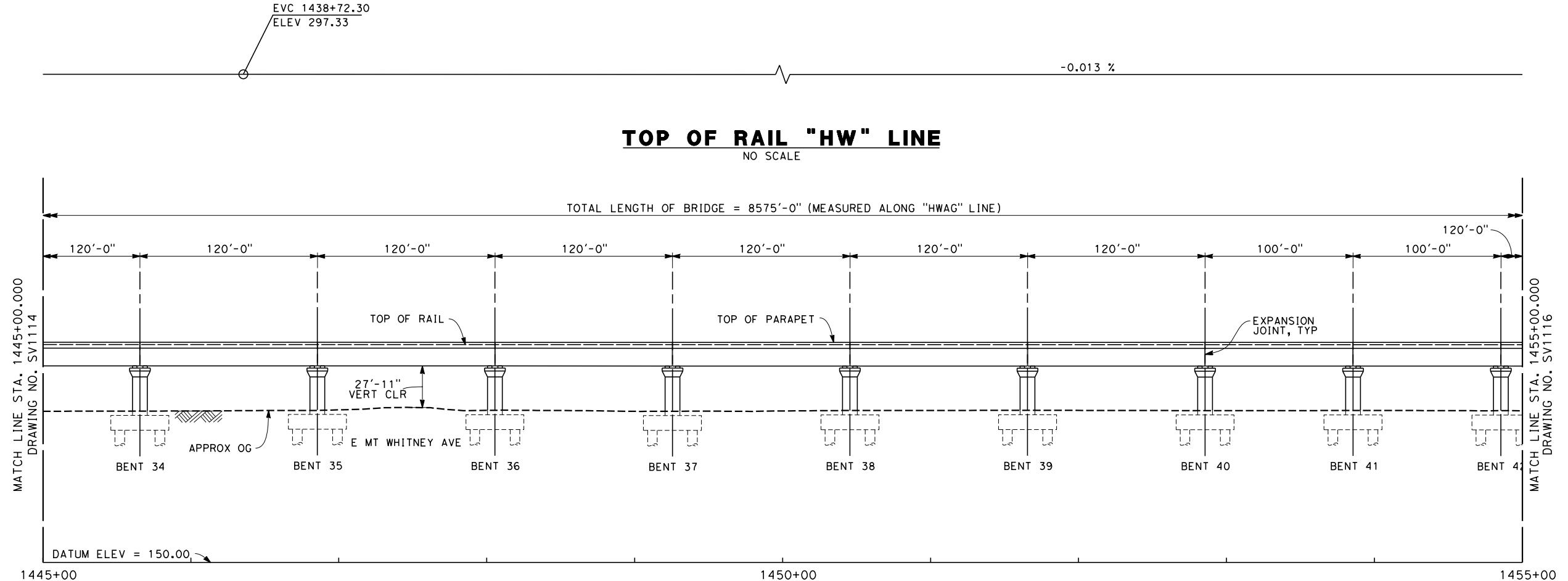
Digitized by srujanika@gmail.com

CONTRACT NO.	HSR 06-0003
DRAWING NO.	SV1113
SCALE	AS SHOWN
SHEET NO.	4 OF 11

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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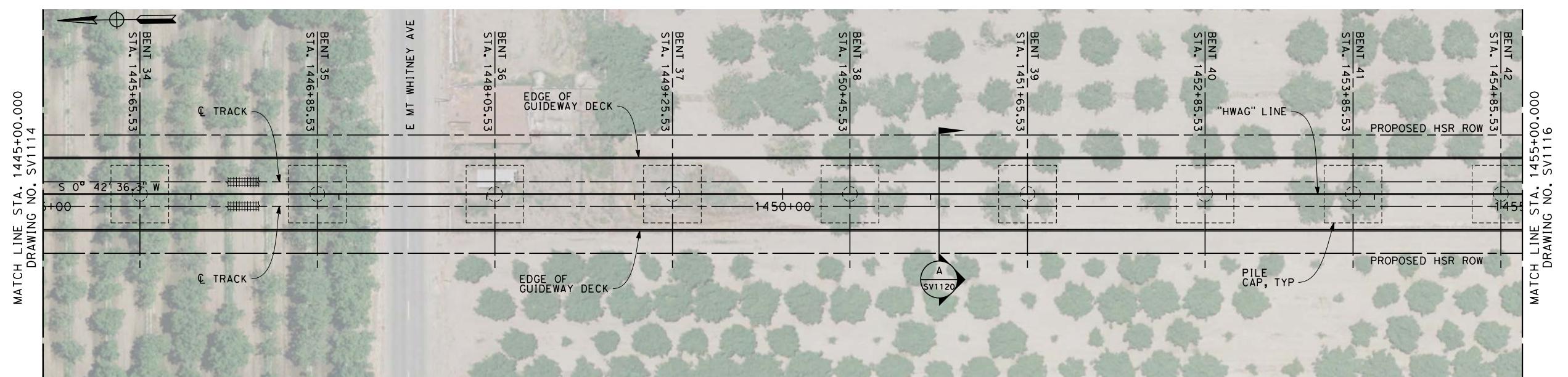
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## ELEVATION

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SCALE 1" = 40



## **PLAN**

SCALE 1" = 4



CALIFORNIA HIGH-SPEED TRAIN PROJECT

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

**D SET 15%**  
**SUBMISSION**  
-  
**T FOR**  
**STRUCTION**

**CONTRACT NO.**  
**HSR 06-0003**

**DRAWING NO.**  
**SV1115**

**SCALE**  
**AS SHOWN**

**SHEET NO.**  
**6 OF 11**

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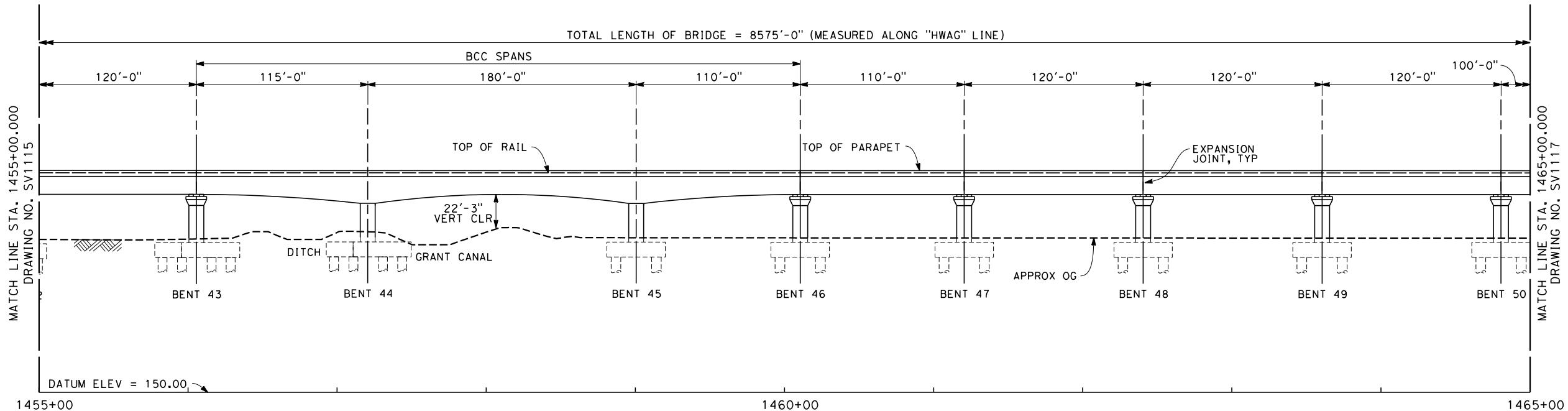
-0.013 %

BVC 1465+59.30  
ELEV 296.98

# **TOP OF RAIL "HW" LINE**

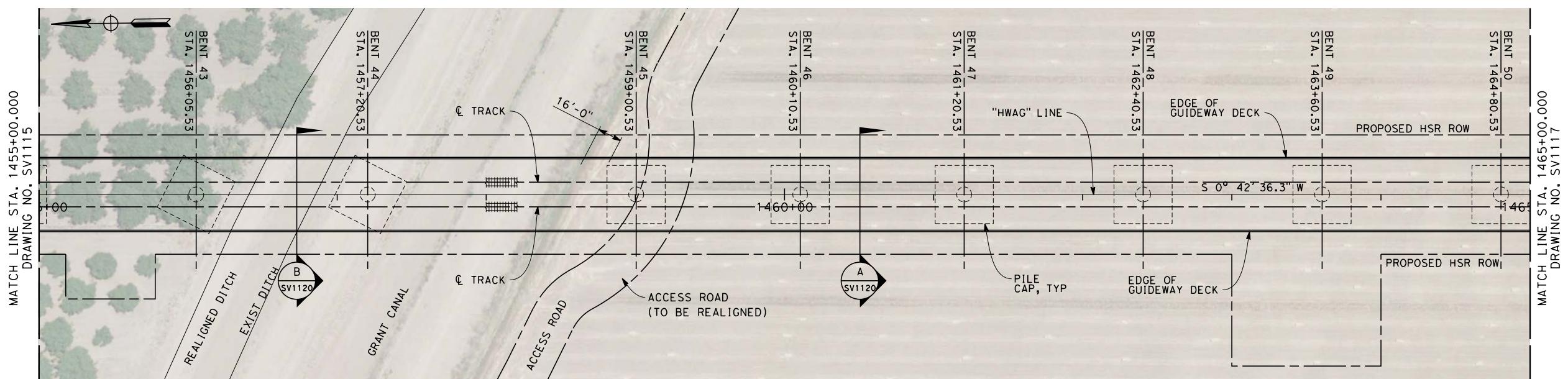
NO SCALE

TOTAL LENGTH OF BRIDGE = 8575'-0" (MEASURED ALONG "HWAG" LINE)



## ELEVATION

SCALE 1" = 40



## NOTES

1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

## LEGEND:

- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL

\* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT"

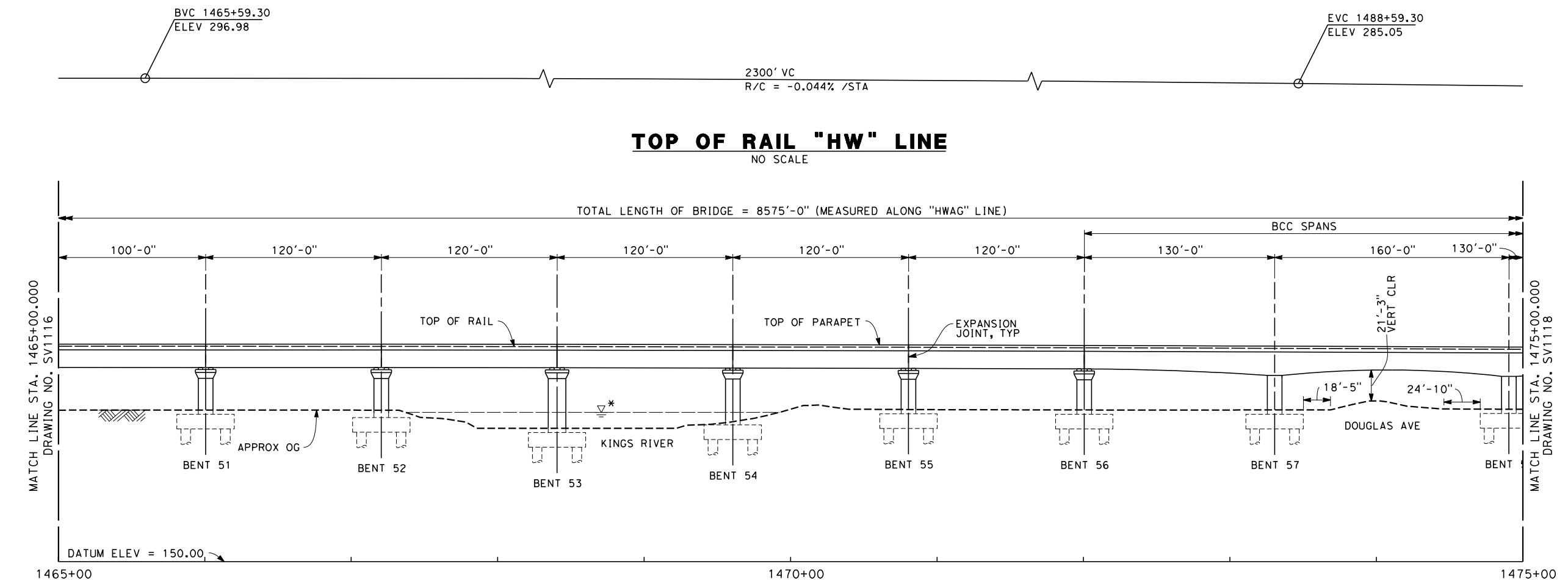
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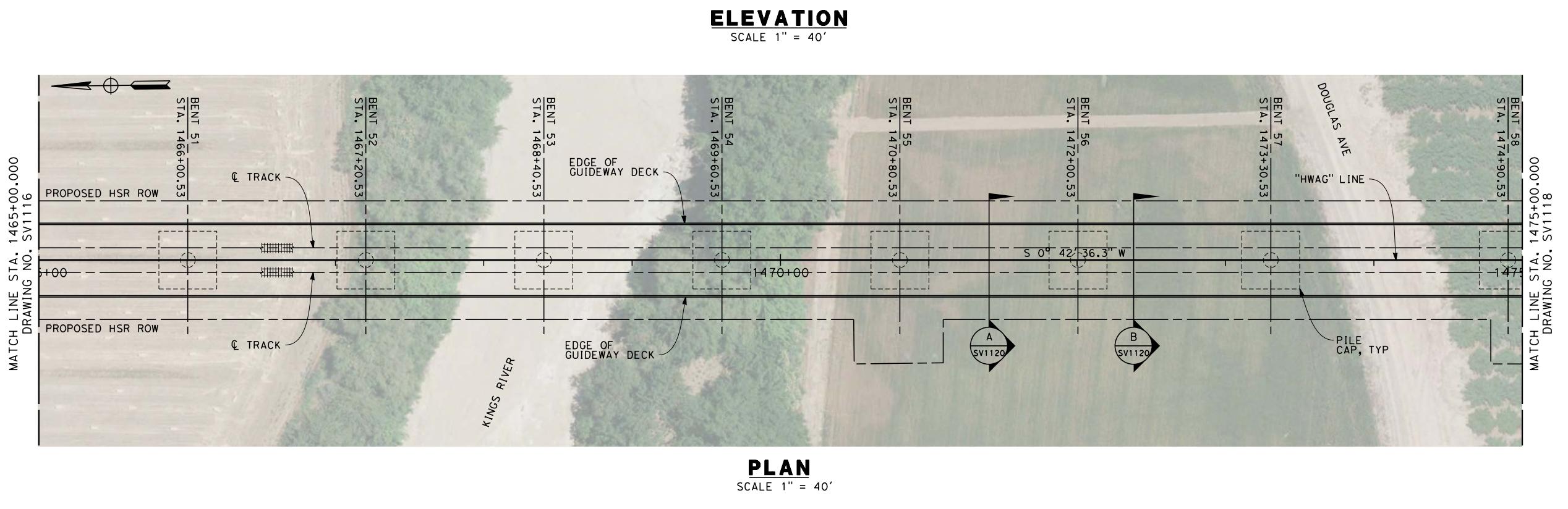
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**

HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

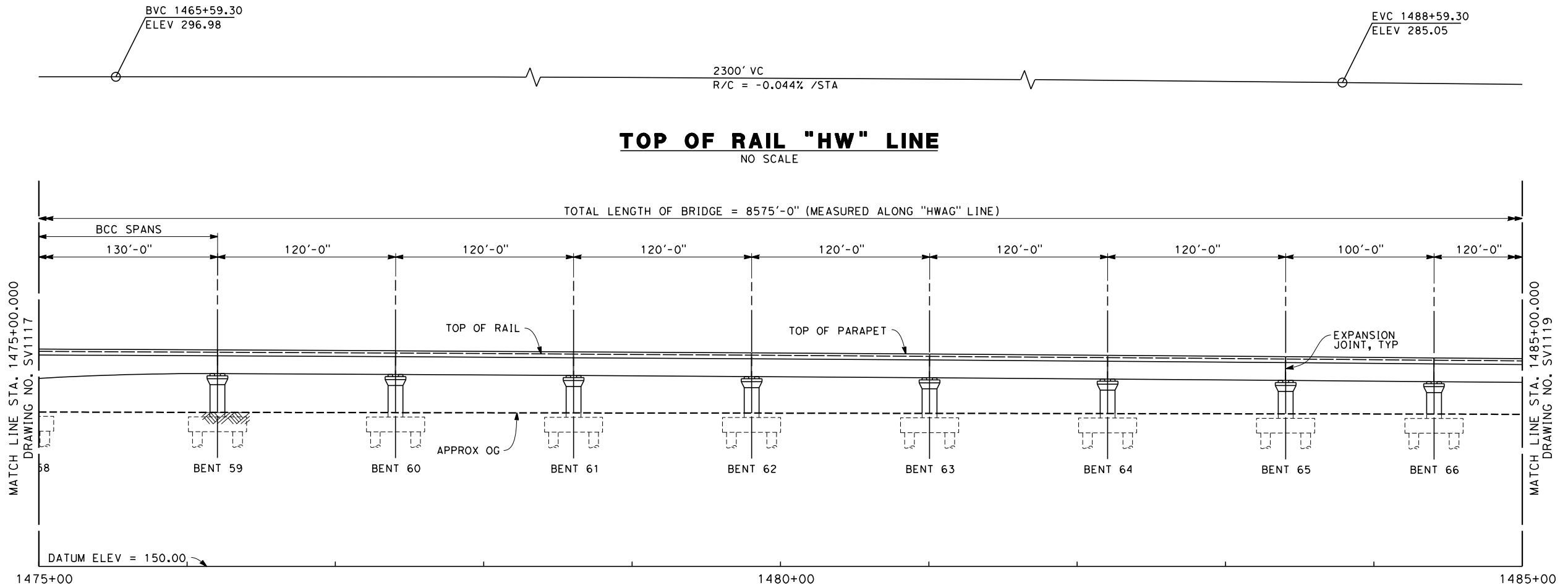
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1116  
SCALE  
AS SHOWN  
SHEET NO.  
7 OF 11



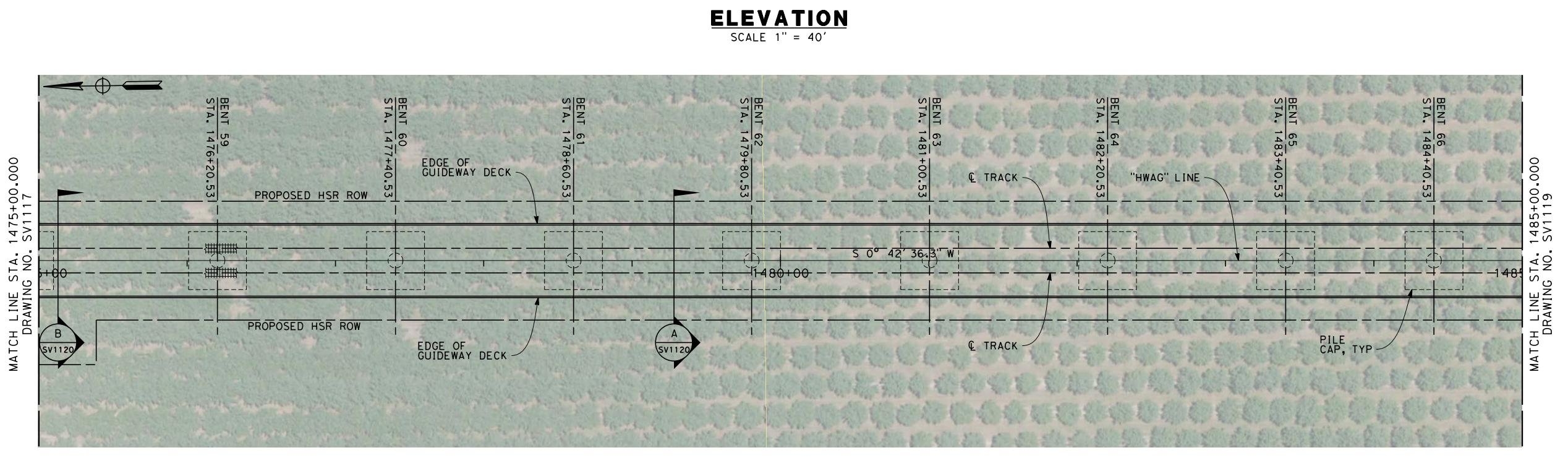
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPN  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN	HANFORD WEST BYPASS SUBSECTION	DRAWING NO. SV1117
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	CALIFORNIA	ALIGNMENT HW (AT-GRADE)	SCALE
IN CHARGE R. COFFIN			KINGS RIVER VIADUCT PLAN AND ELEVATION	AS SHOWN
DATE 12/31/13	DESCRIPTION 12/31/13			SHEET NO. 8 OF 11



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPN  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

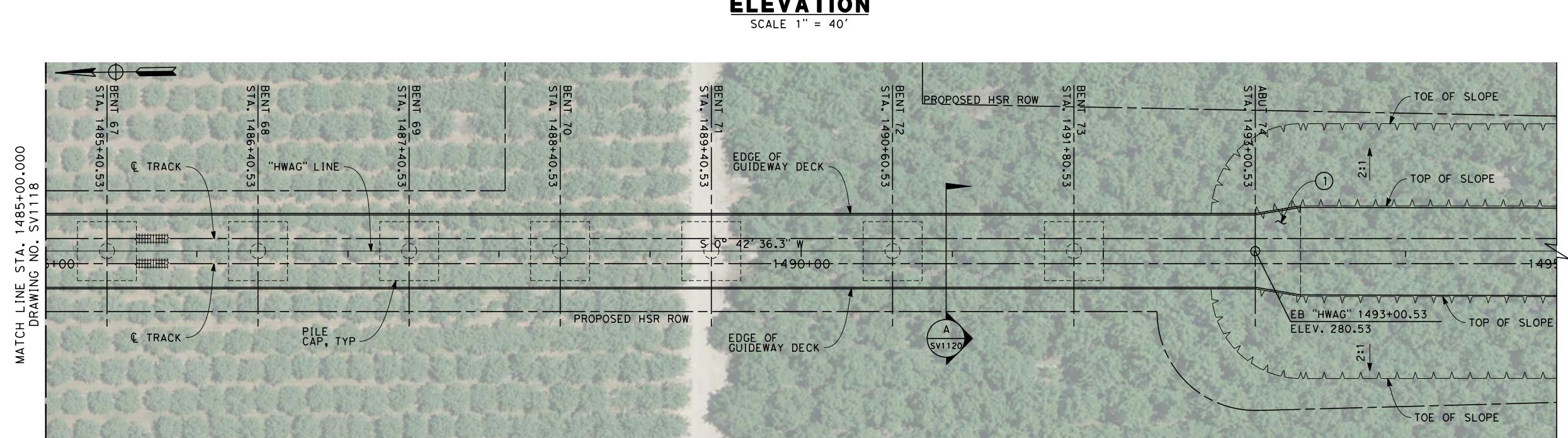
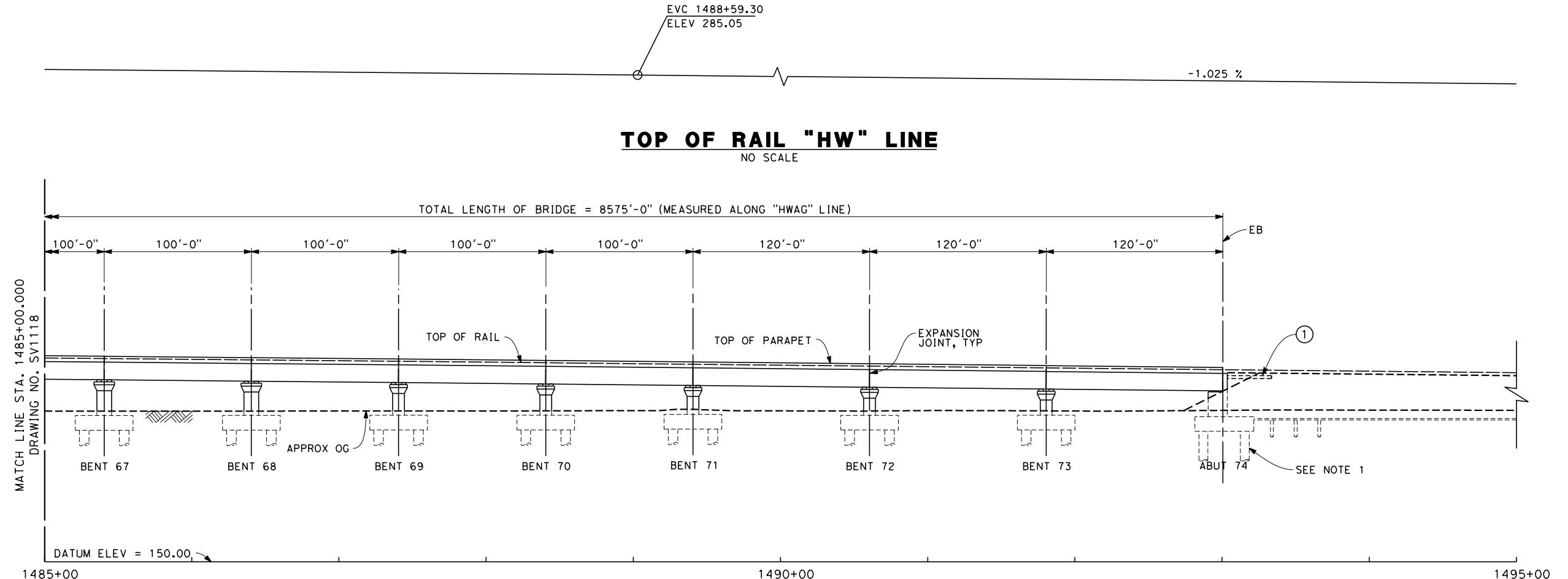


- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



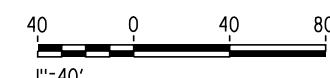
NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPML  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

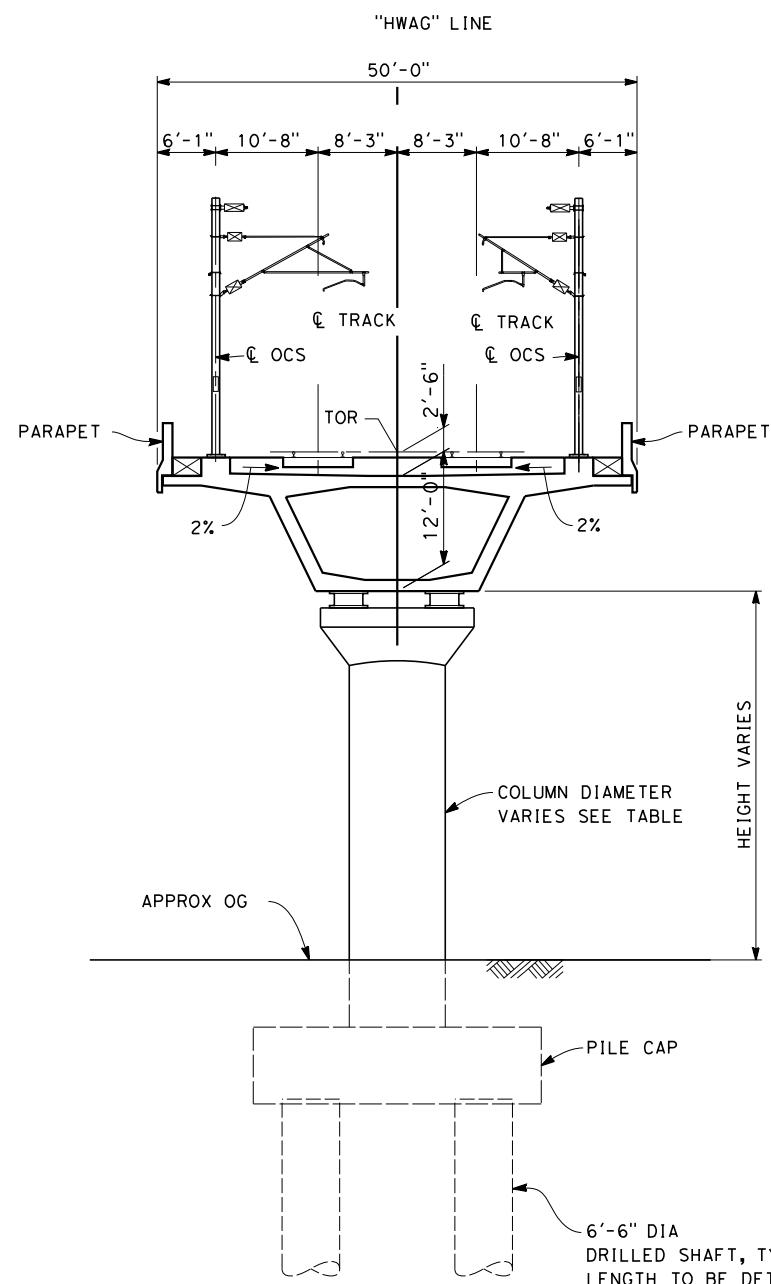


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**

HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1119  
SCALE  
AS SHOWN  
SHEET NO.  
10 OF 11

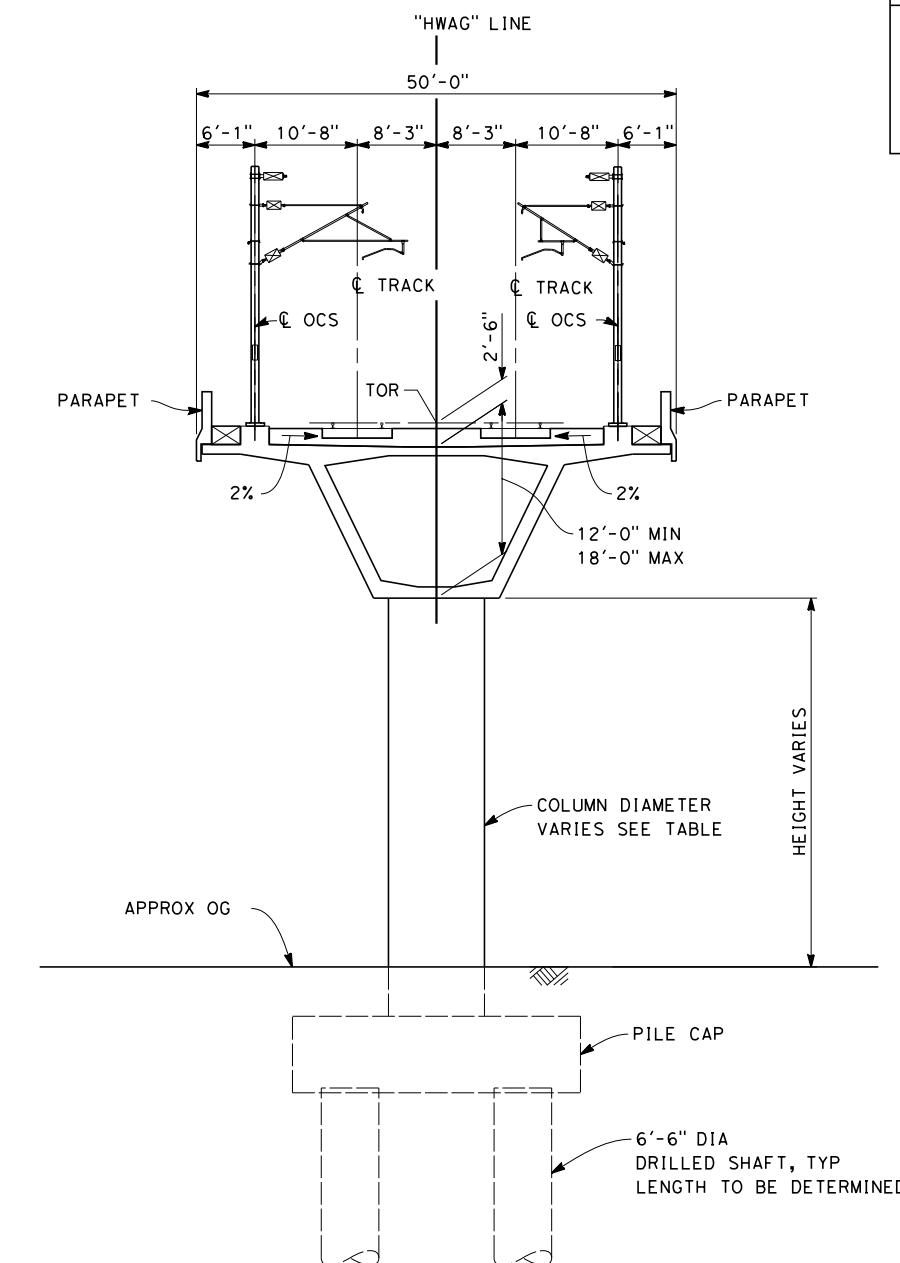
COLUMN DIAMETERS	
HEIGHT TO SOFFIT	DIAMETER
0-20	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT



### SECTION A

SCALE: 1" = 10'

STA 1407+26 THROUGH 1456+06  
STA 1460+11 THROUGH 1472+01  
STA 1476+21 THROUGH 1493+01



### SECTION B

SCALE: 1" = 10'

STA 1456+06 THROUGH 1460+11  
STA 1472+01 THROUGH 1476+21



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	NOT FOR CONSTRUCTION
DRAWN BY F. PALERMO		
CHECKED BY A. ARMSTRONG		
IN CHARGE R. COFFIN		
DATE 12/31/13		



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
KINGS RIVER VIADUCT  
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1120
SCALE AS SHOWN
SHEET NO. 11 OF 11



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY J. VALENZUELA	-	CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		

REV

DATE

BY

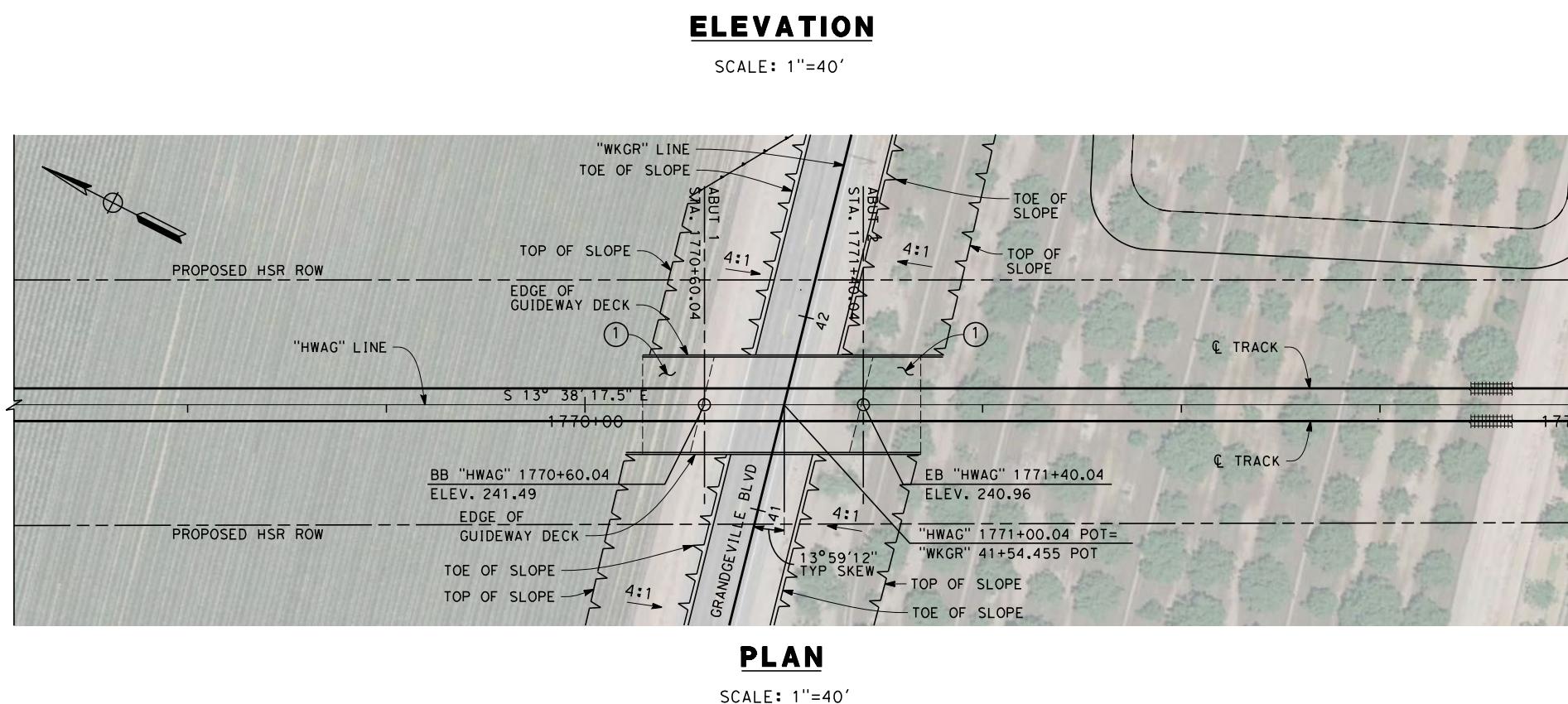
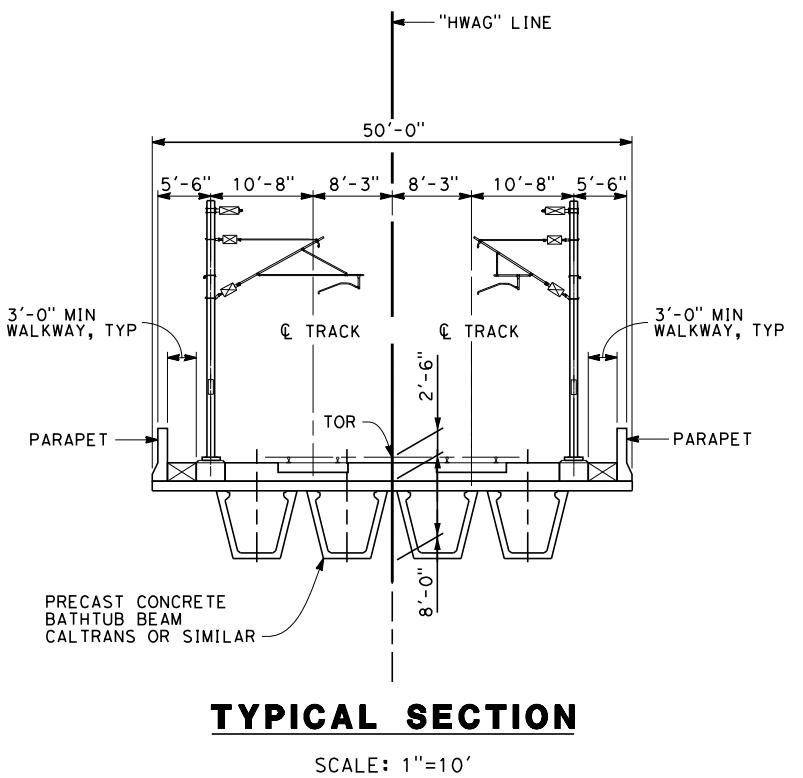
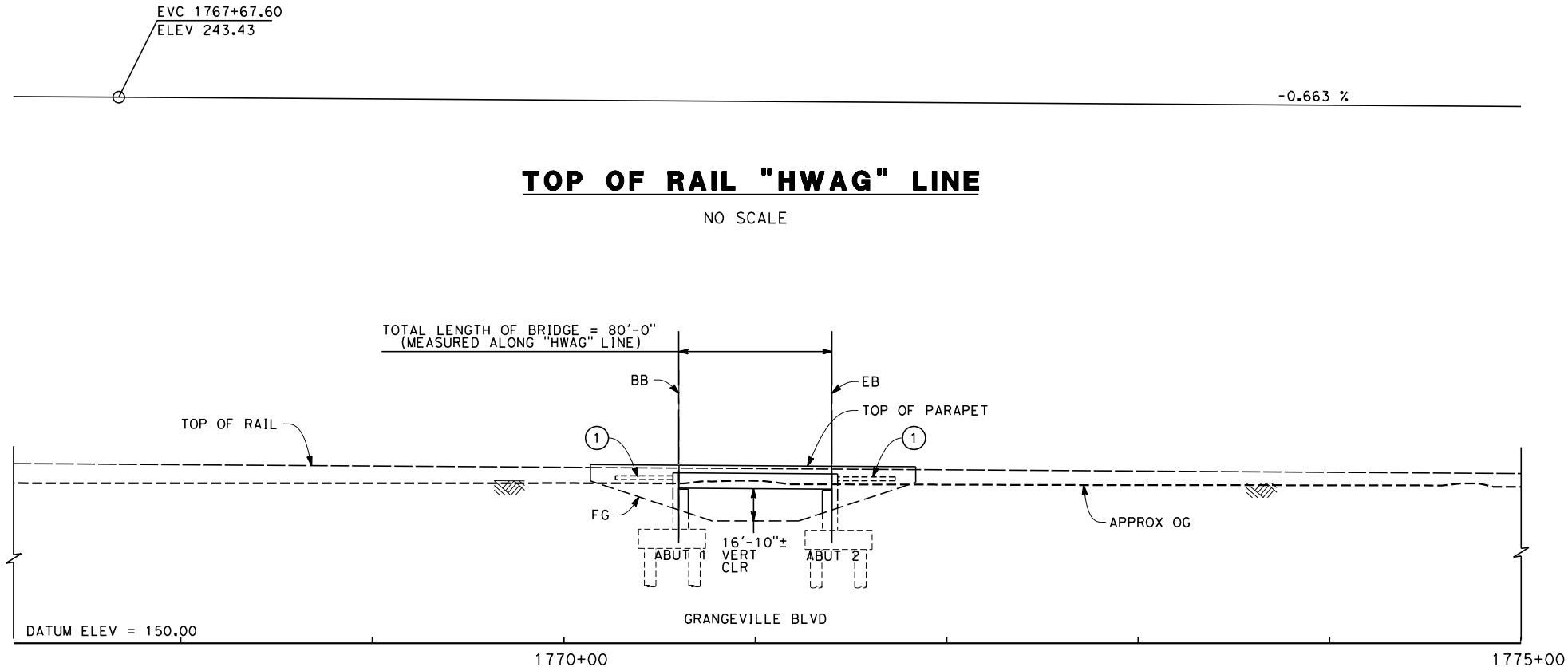
CHK

APP

DESCRIPTION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2025
SCALE AS SHOWN
SHEET NO. 1 OF 2

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
GRANGEVILLE BLVD UNDERPASS  
KEY MAP



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD HANFORD WEST BYPASS SUBSECTION ALIGNMENT HW (AT-GRADE) GRANGEVILLE BLVD UNDERPASS PLAN AND ELEVATION	CONTRACT NO. HSR 06-0003
DRAWN BY J. VALENZUELA	-				DRAWING NO. SV2026
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION				SCALE AS SHOWN
IN CHARGE R. COFFIN					SHEET NO. 2 OF 2
REV DATE BY CHK APP	DESCRIPTION	DATE 12/31/13			



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CONTRACT NO. HSR 06-0003
DRAWN BY J. VALENZUELA	-			DRAWING NO. SV2030
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION			SCALE AS SHOWN
IN CHARGE R. COFFIN				SHEET NO. 1 OF 2
DATE 12/31/13				
REV DATE BY CHK APP	DESCRIPTION			

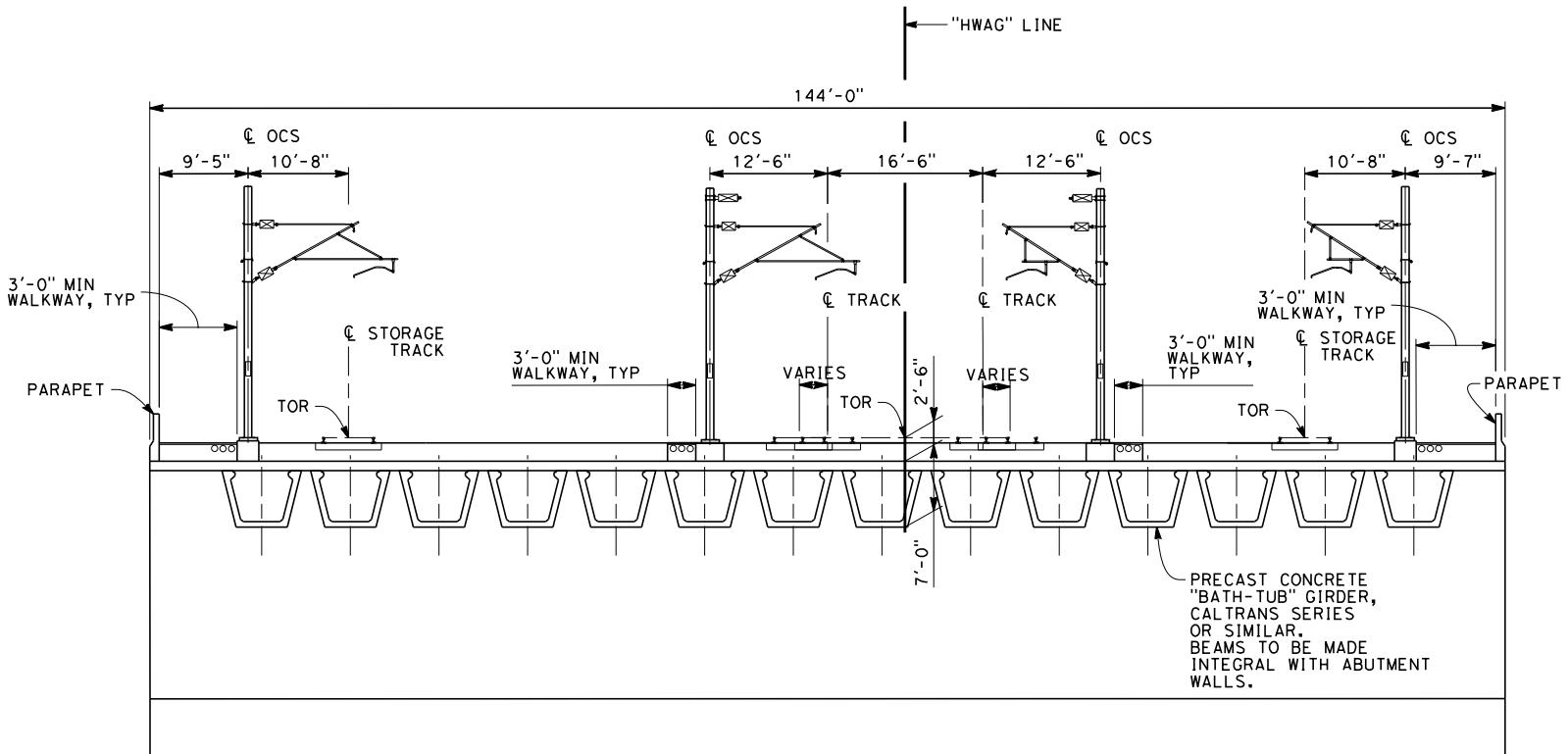
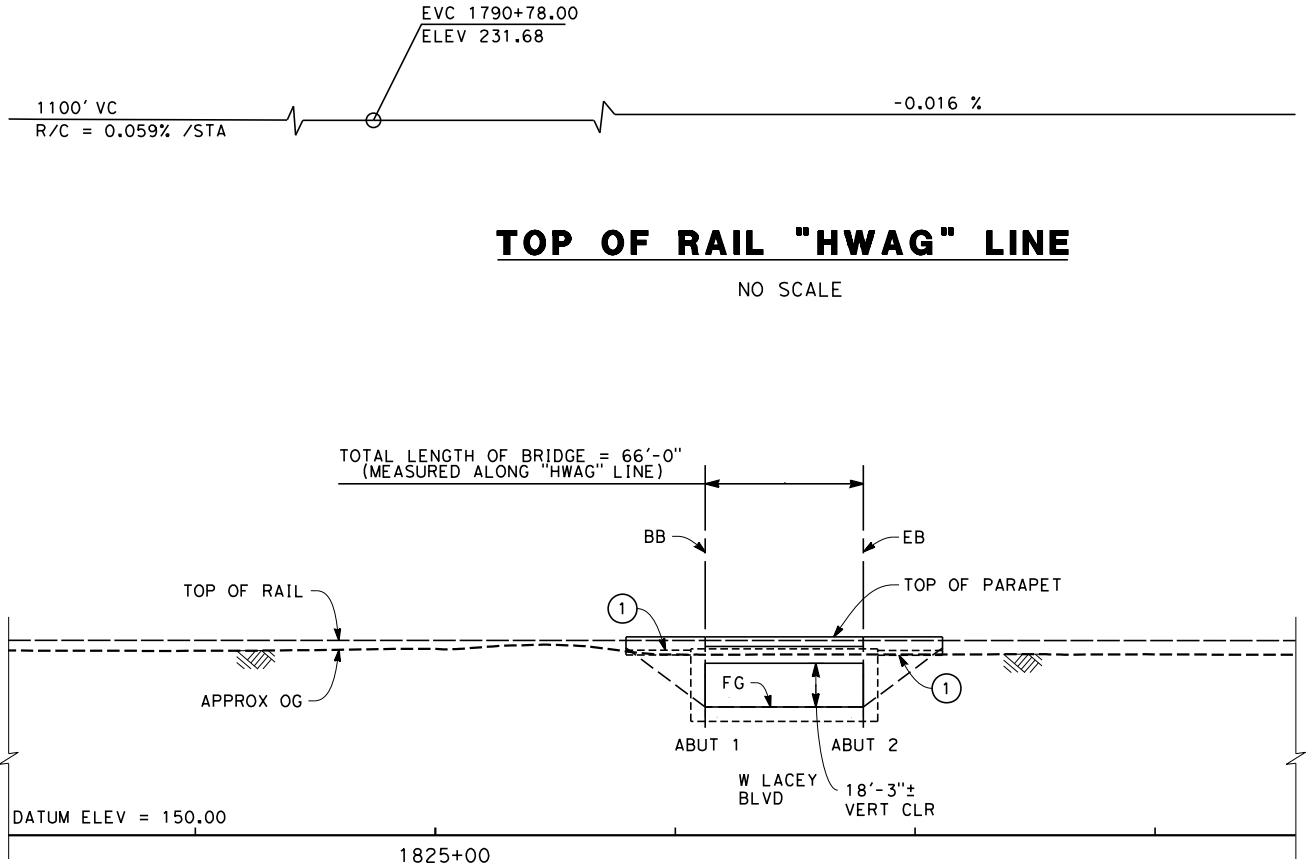
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
W LACEY BLVD UNDERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2030

SCALE  
AS SHOWN

SHEET NO.  
1 OF 2

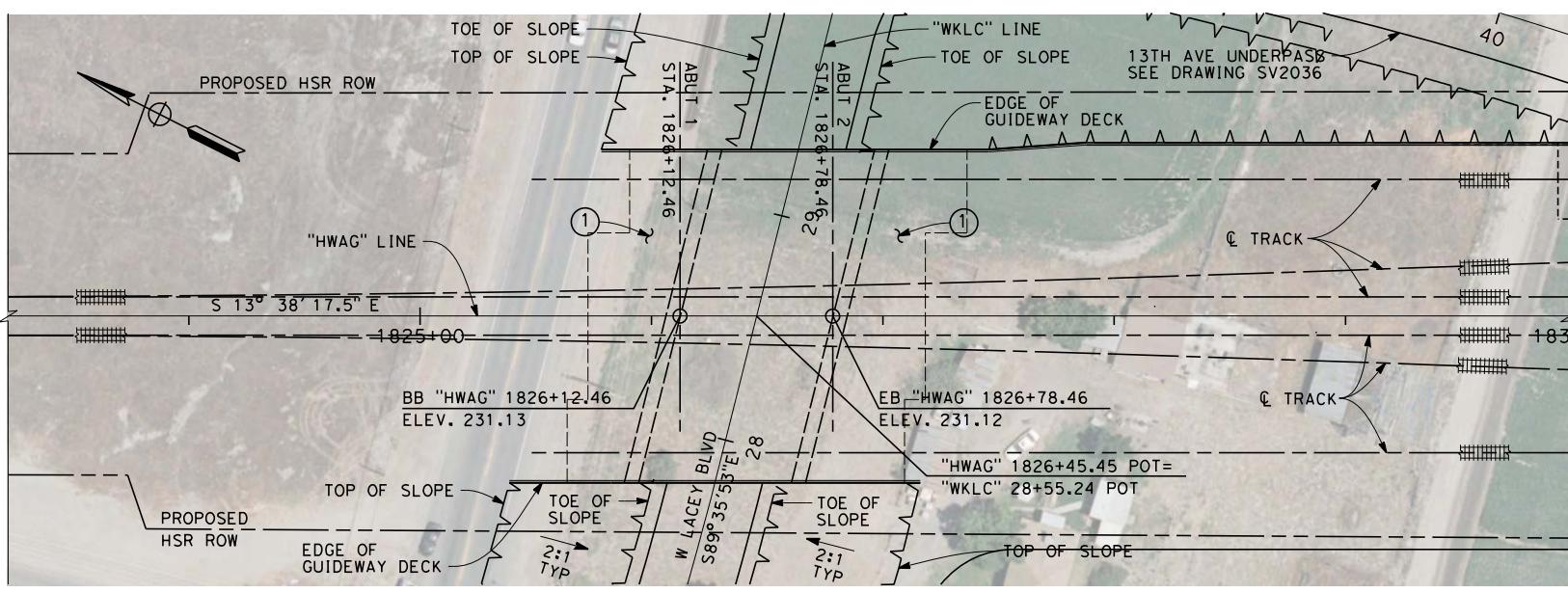


**ELEVATION**

SCALE: 1"=40'

**TYPICAL SECTION**

SCALE: 1"=10'



**PLAN**

SCALE: 1"=40'

NOTES:

1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.

LEGEND:

- (1) STRUCTURE APPROACH SLAB
- (2) RETAINING WALL
- ||||| INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK



REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

DESIGNED BY  
M. FISHER  
DRAWN BY  
J. VALENZUELA  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
W LACEY BLVD UNDERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2031  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 2



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY J. VALENZUELA	-	CALIFORNIA HIGH-SPEED TRAIN
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		

REV

DATE

BY

CHK

APP

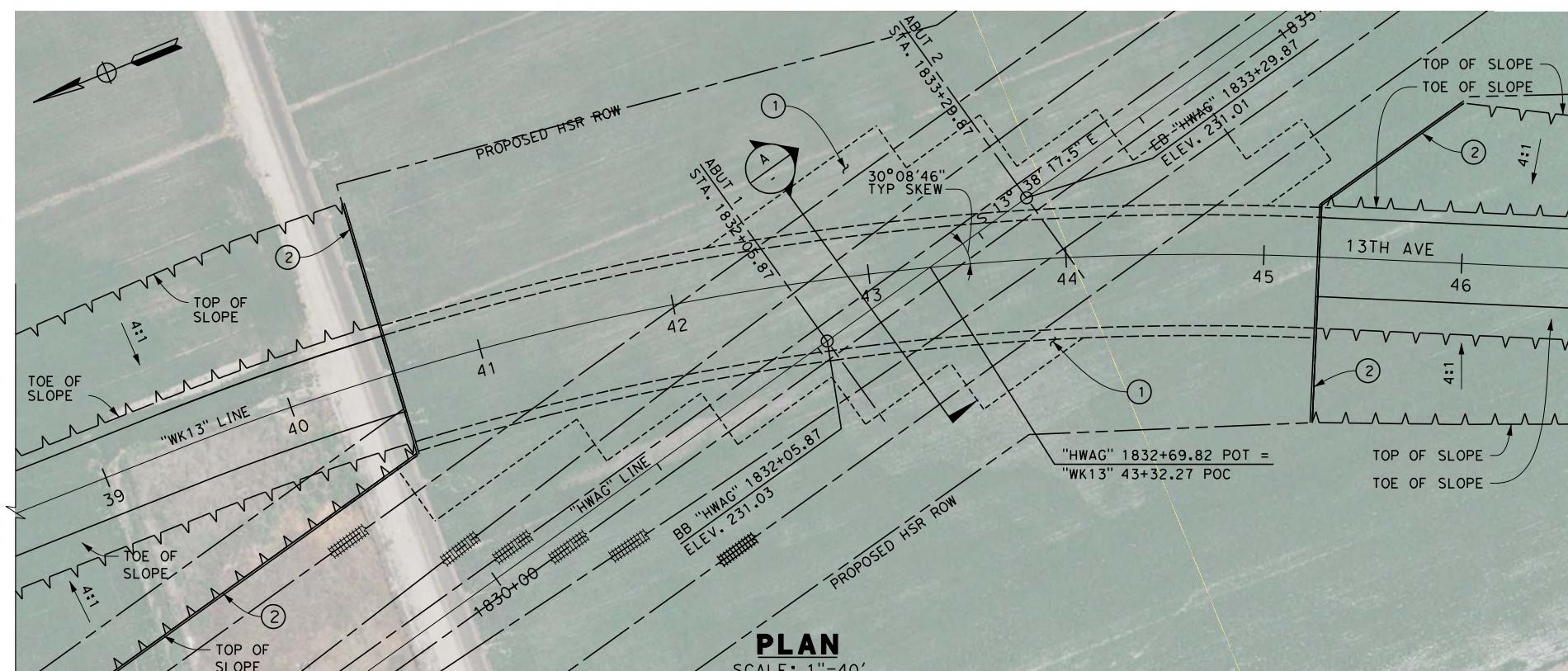
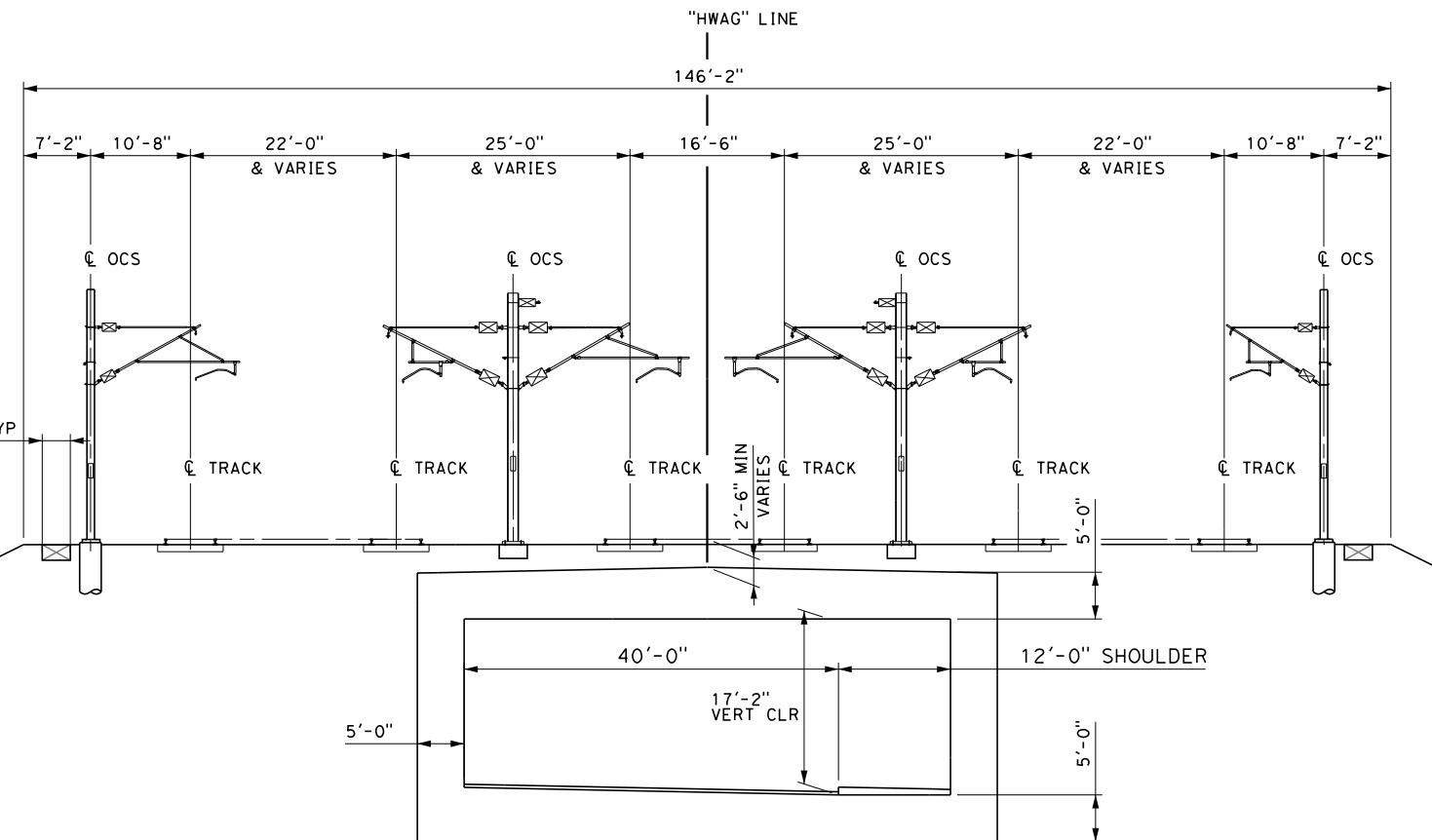
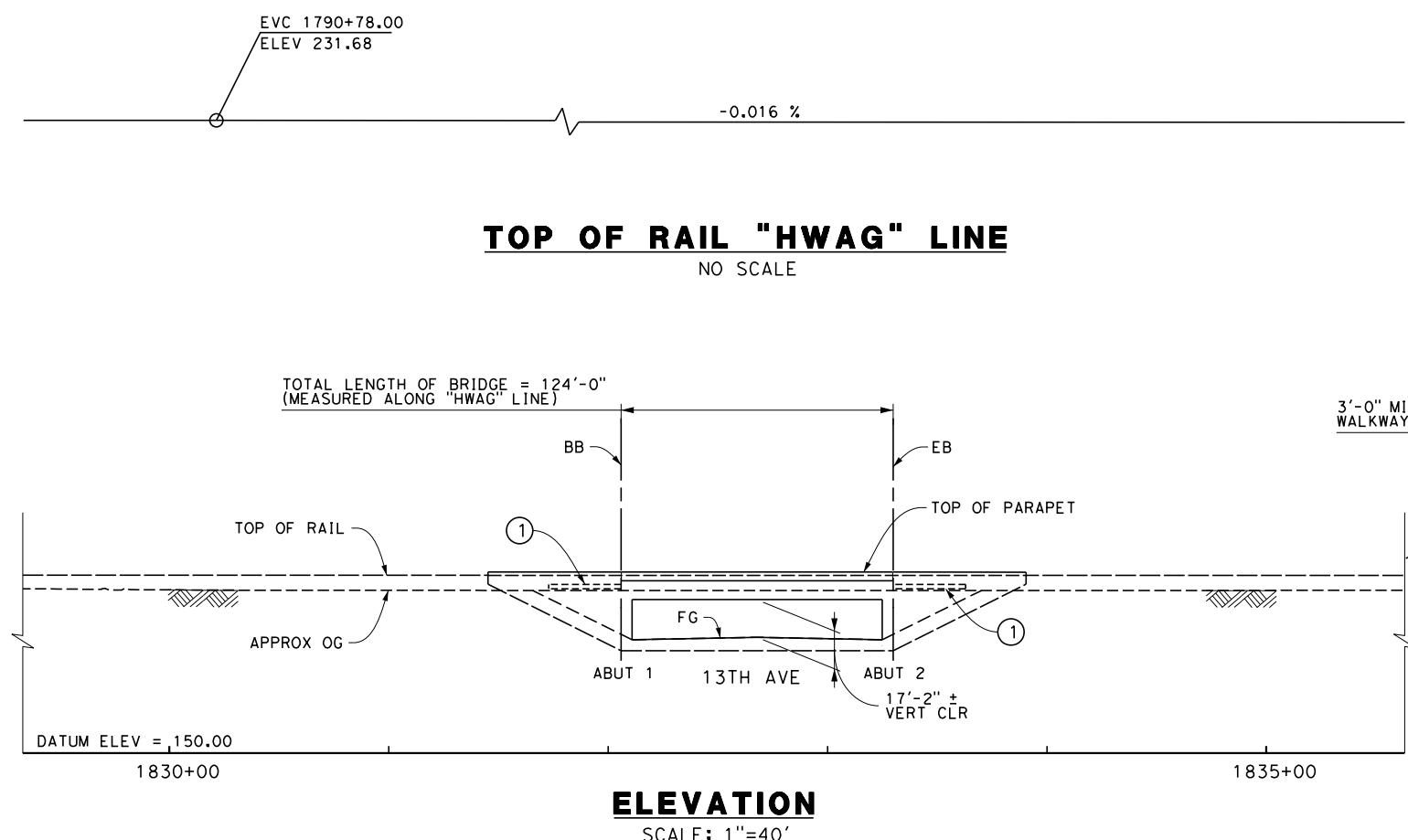
DESCRIPTION

12/31/13



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
13TH AVE UNDERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2035  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



## **TYPICAL SECTION A**

SCALE: 1" = 10'

## NOTES:

- FOR MINIMUM VERTICAL CLEARANCES,  
SEE ALIGNMENT DRAWINGS.
  - WALKWAY AND DUCTBANKS LOCALLY REALIGNED  
TO PASS OVER SUBSURFACE STRUCTURES

## LEGEND:

- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL

 INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK



CALIFORNIA HIGH-SPEED TRAIN PROJECT

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
13TH AVE UNDERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2036  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 2



REV	DATE	BY	CHK	APP	DESCRIPTION	DATE
					12/31/13	

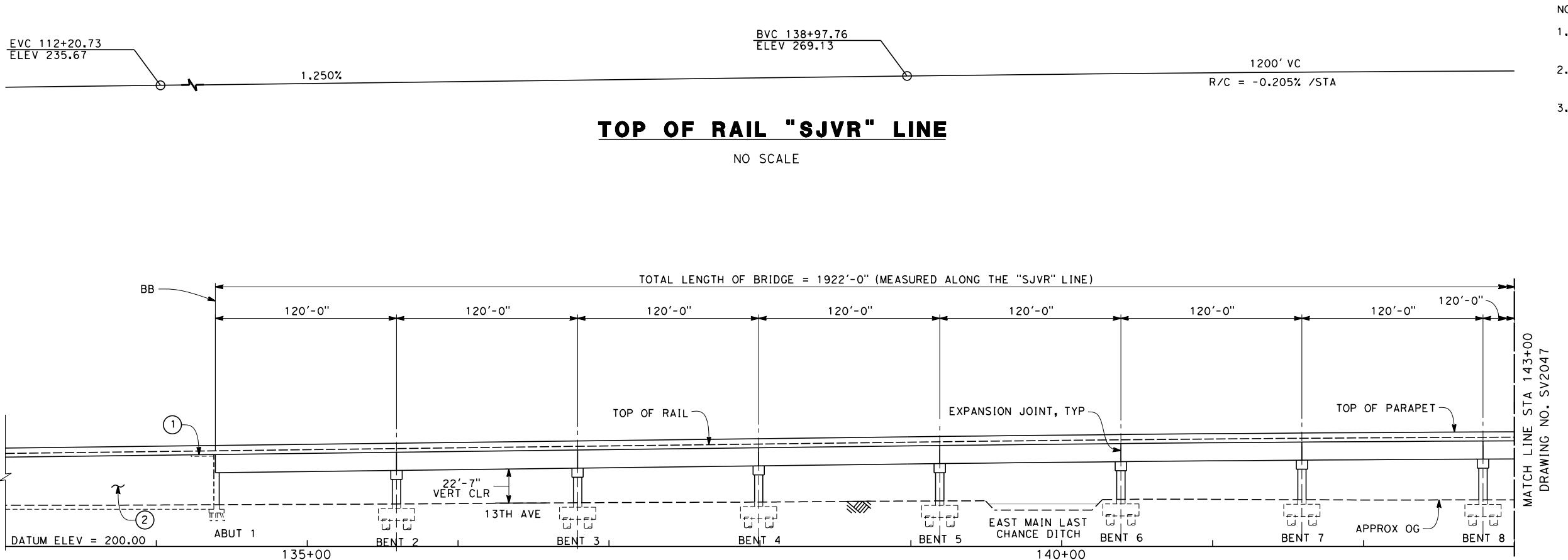
DESIGNED BY  
M. FISHER  
DRAWN BY  
J. VALENZUELA  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
SJVR OVERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2045  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 4



NOTES:

1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.
3. THE SJVR CROSSING OF THE HST SHALL INCLUDE PHYSICAL MEASURES SUCH AS CONTAINMENT PARAPETS, BARRIERS, AND/OR PHYSICAL DERAILMENT PROTECTION TO MITIGATE THE POTENTIAL FOR ERRANT VEHICLES AND/OR CARGO ON OR APPROACHING THE OVERHEAD FACILITY FROM INTRUDING INTO THE HST FACILITY AND ITS OPERATING SPACE. DESIGN OF THE PHYSICAL MEASURES SHALL BE SUBSTANTIATED BY A SITE-SPECIFIC PRELIMINARY HAZARD ANALYSIS (PHA) AND A THREAT AND VULNERABILITY ASSESSMENT (TVA).

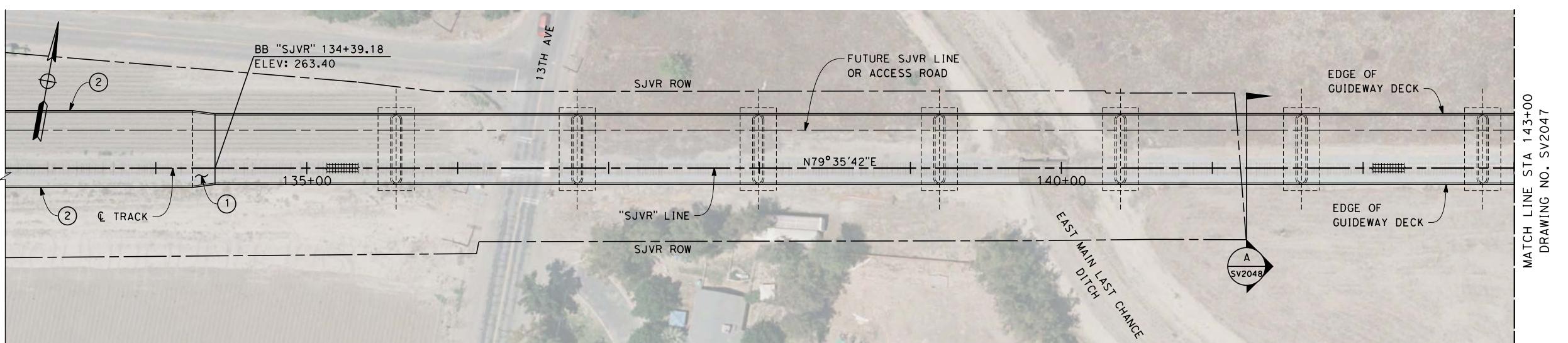
**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- ③ AR FENCE (WITH SOLID PLATE)

 INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK

ELEVATION

SCALE: 1''=40'



PLAN

SCALE: 1"=40'

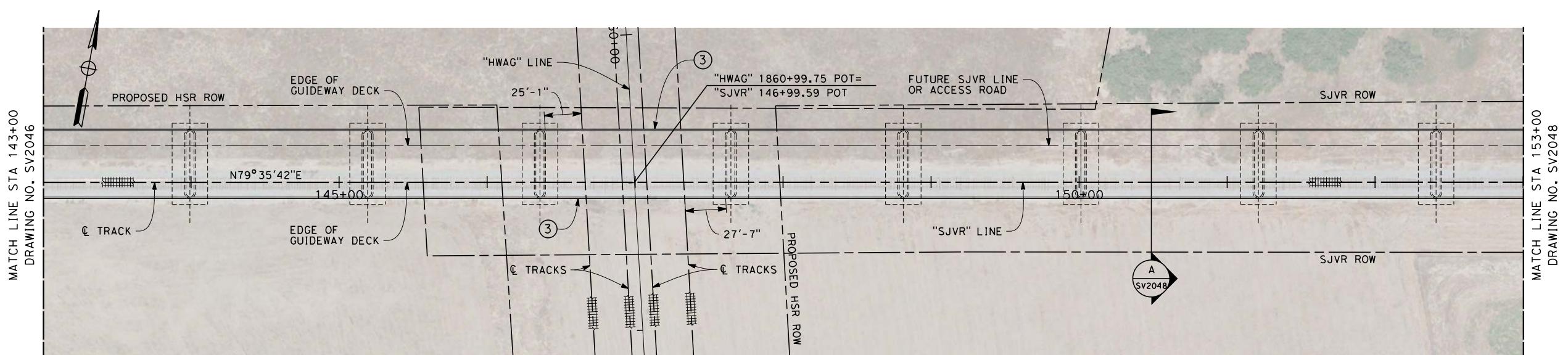
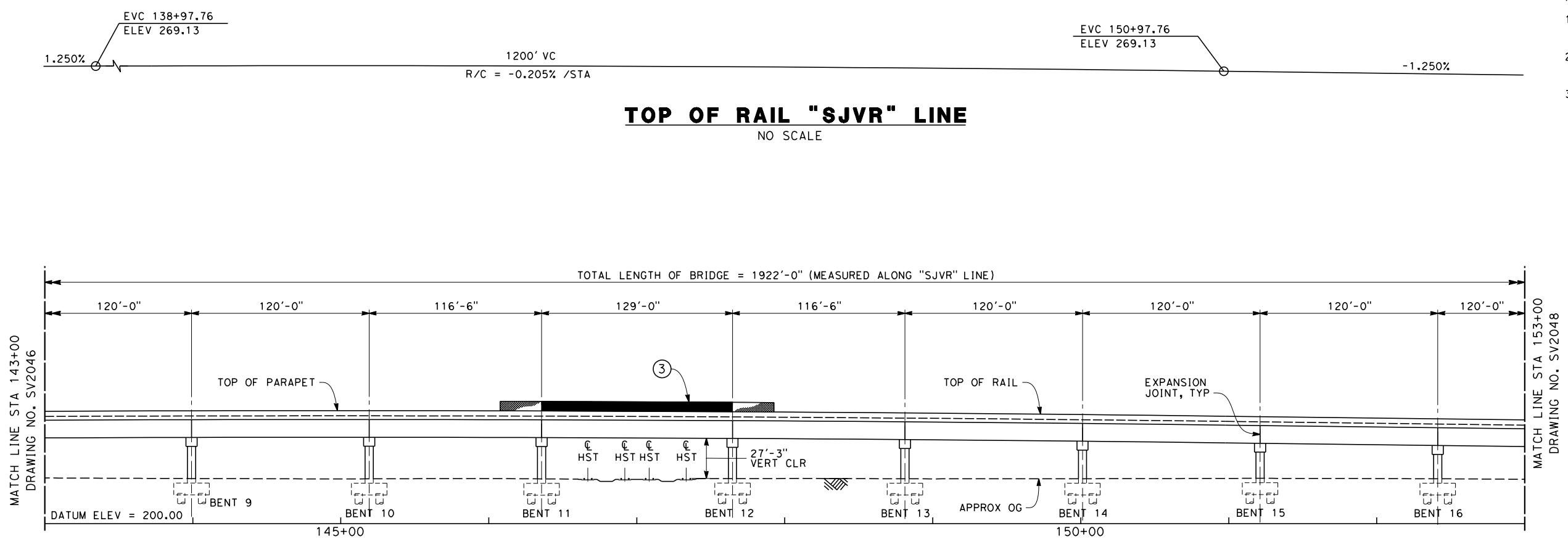


CALIFORNIA HIGH-SPEED TRAIN PROJECT

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
SJVR OVERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2046  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 4

andrew.armstrong@arup.com dms90424-X-FB-SV-2047-HWAG.dgn  
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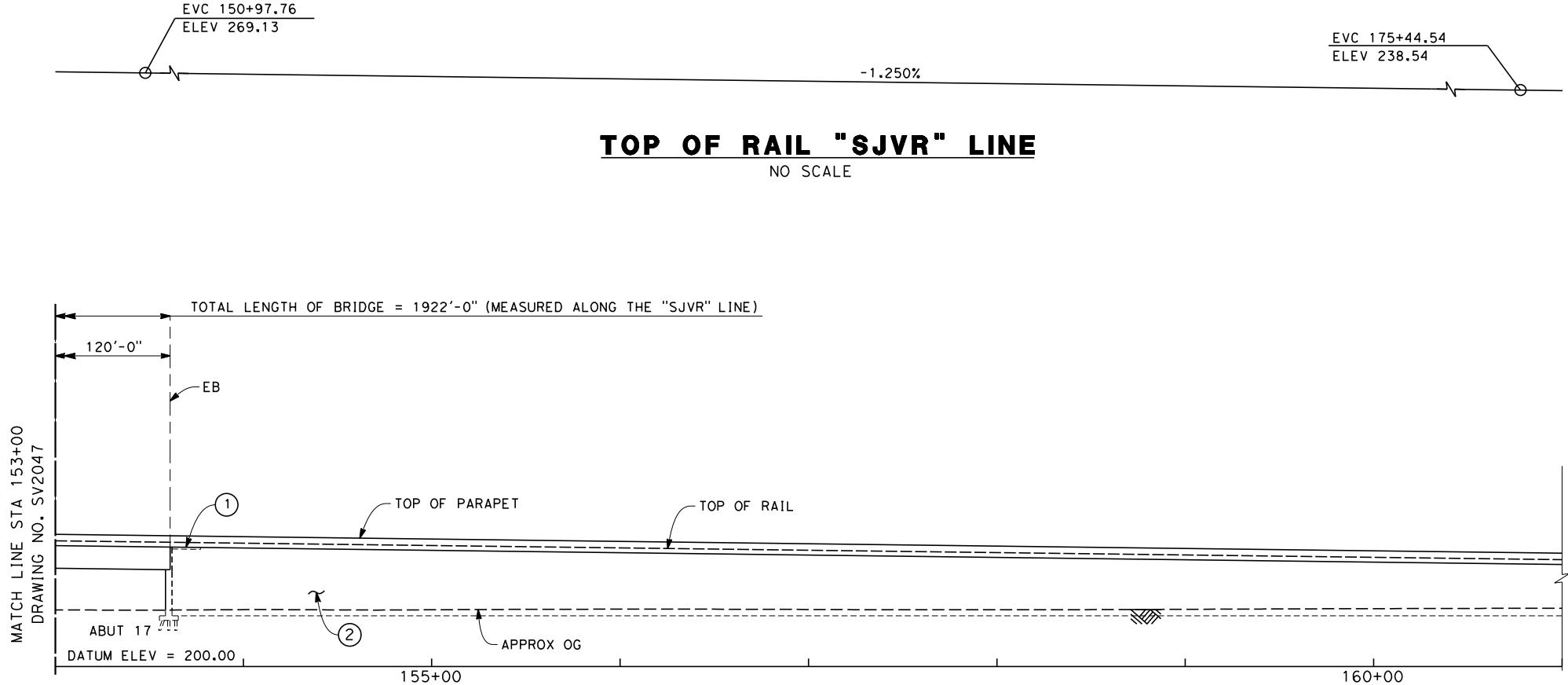
**PLAN**



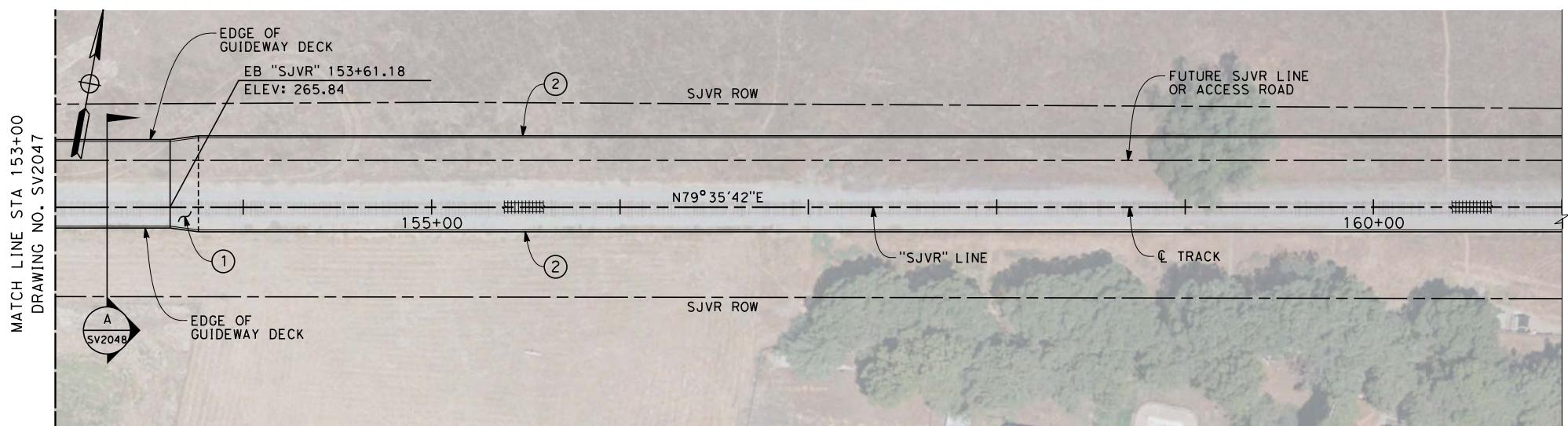
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
SJVR OVERPASS  
PLAN AND ELEVATION

CONTRACT NO.
HSR 06-0003
DRAWING NO.
SV2047
SCALE
AS SHOWN
SHEET NO.
3 OF 4



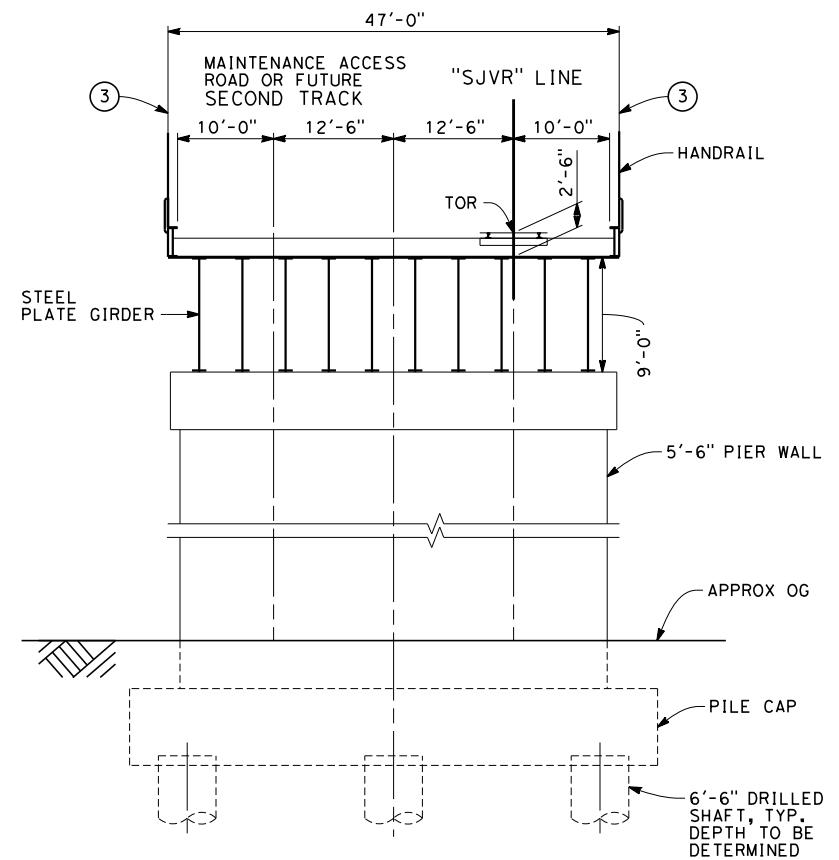
**ELEVATION**  
SCALE: 1"=40'



**PLAN**  
SCALE: 1"=40'

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CONTRACT NO. HSR 06-0003
DRAWN BY J. VALENZUELA	-			DRAWING NO. SV2048
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION			SCALE AS SHOWN
IN CHARGE R. COFFIN				SHEET NO. 4 OF 4
DATE 12/31/13	DESCRIPTION 12/31/13			
REV	DATE	BY	CHK	APP

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW (AT-GRADE)  
SJVR OVERPASS  
PLAN AND ELEVATION



**TYPICAL SECTION**

SCALE: 1"=10'

NOTES:

1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.
3. THE SJVR CROSSING OF THE HST SHALL INCLUDE PHYSICAL MEASURES SUCH AS CONTAINMENT PARAPETS, BARRIERS, AND/OR PHYSICAL DERAILMENT PROTECTION TO MITIGATE THE POTENTIAL FOR ERRANT VEHICLES AND/OR CARGO ON OR APPROACHING THE OVERHEAD FACILITY FROM INTRUDING INTO THE HST FACILITY AND ITS OPERATING SPACE. DESIGN OF THE PHYSICAL MEASURES SHALL BE SUBSTANTIATED BY A SITE-SPECIFIC PRELIMINARY HAZARD ANALYSIS (PHA) AND A THREAT AND VULNERABILITY ASSESSMENT (TVA).

LEGEND:

- (1) STRUCTURE APPROACH SLAB
- (2) RETAINING WALL
- (3) AR FENCE (WITH SOLID PLATE)

||||| INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK

10 0 10 20 40 0 40 80  
1"=10' 1"=40'



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		

REV

DATE

BY

CHK

APP

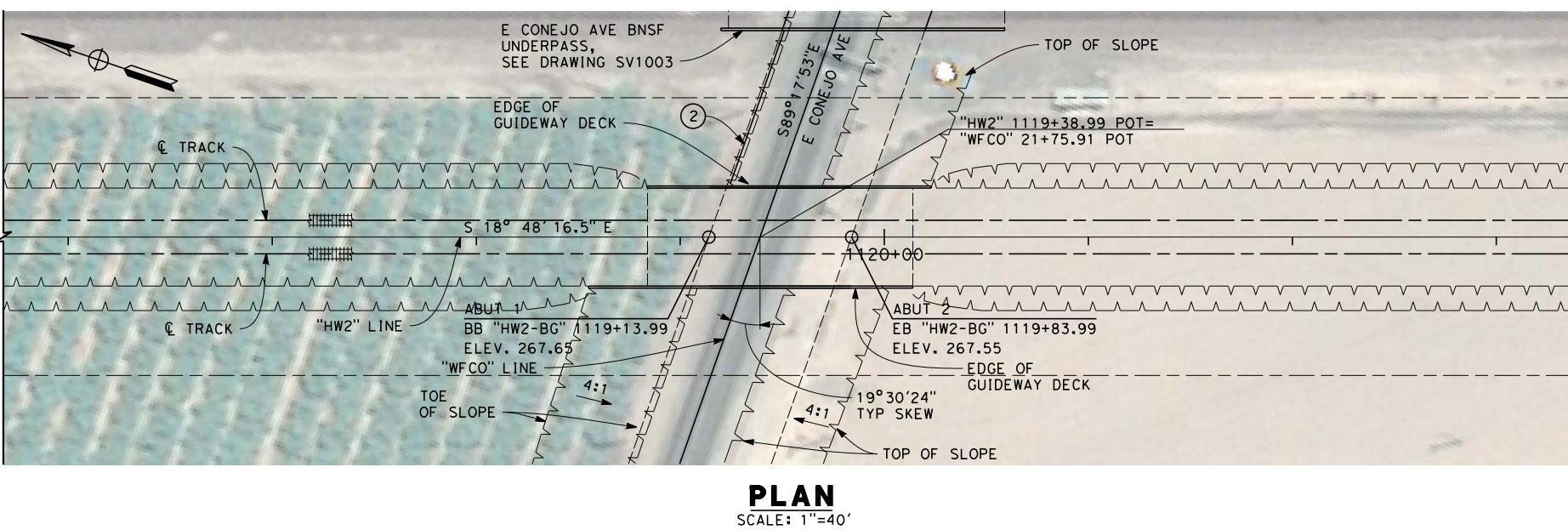
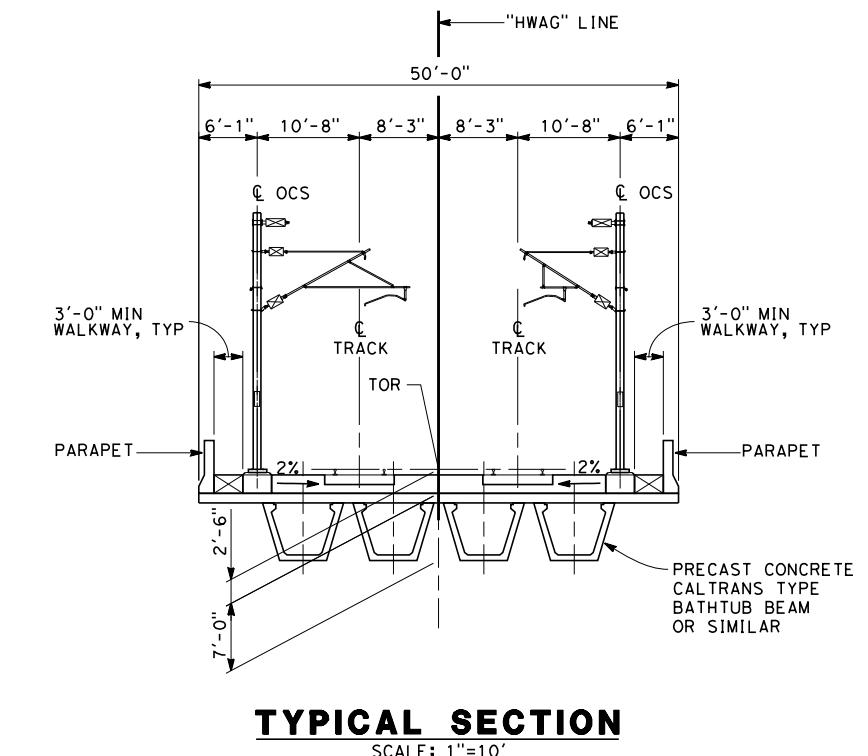
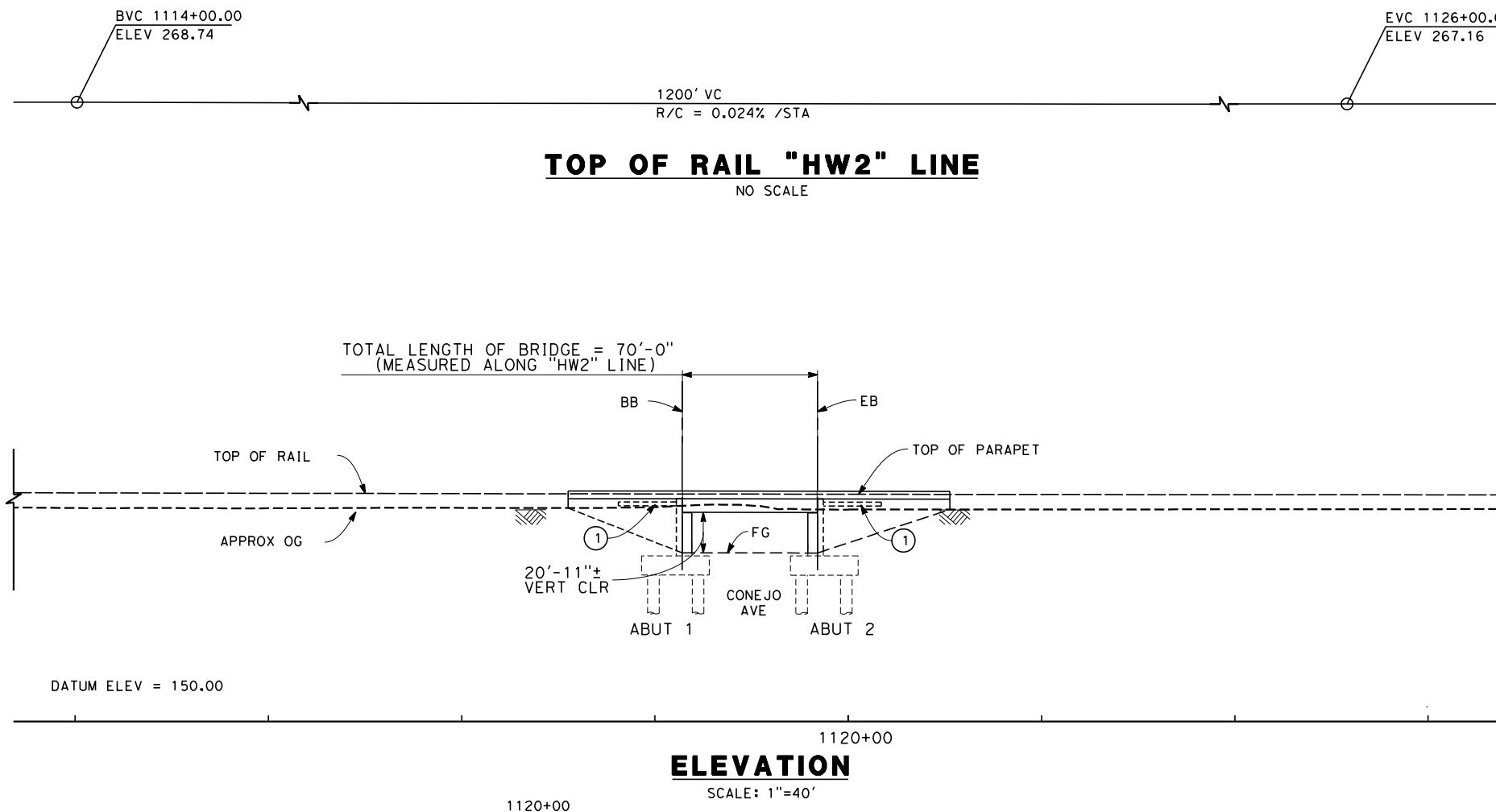
DESCRIPTION

12/31/13



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
E CONEJO AVE HST UNDERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1000  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



NOTES:

1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.

LEGEND:

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALLS
- ||||| INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK

1"=40' 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION	DESIGNED BY M. FISHER	DRAWN BY F. PALERMO	CHECKED BY A. ARMSTRONG	IN CHARGE R. COFFIN	RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED RAIL AUTHORITY
					12/31/13							

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
E CONEJO AVE HST UNDERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1001  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 2



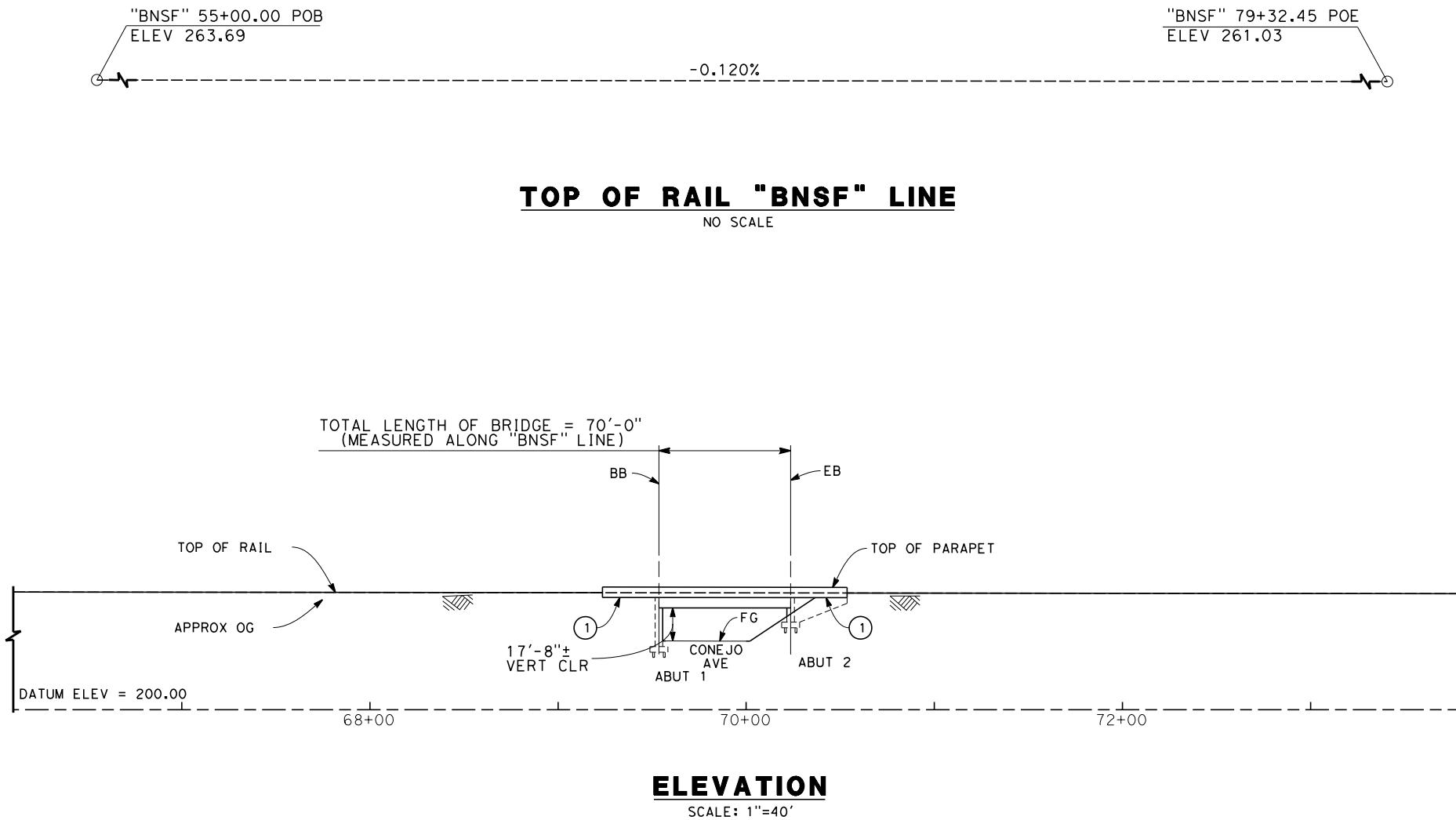
DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		

REV DATE BY CHK APP DESCRIPTION

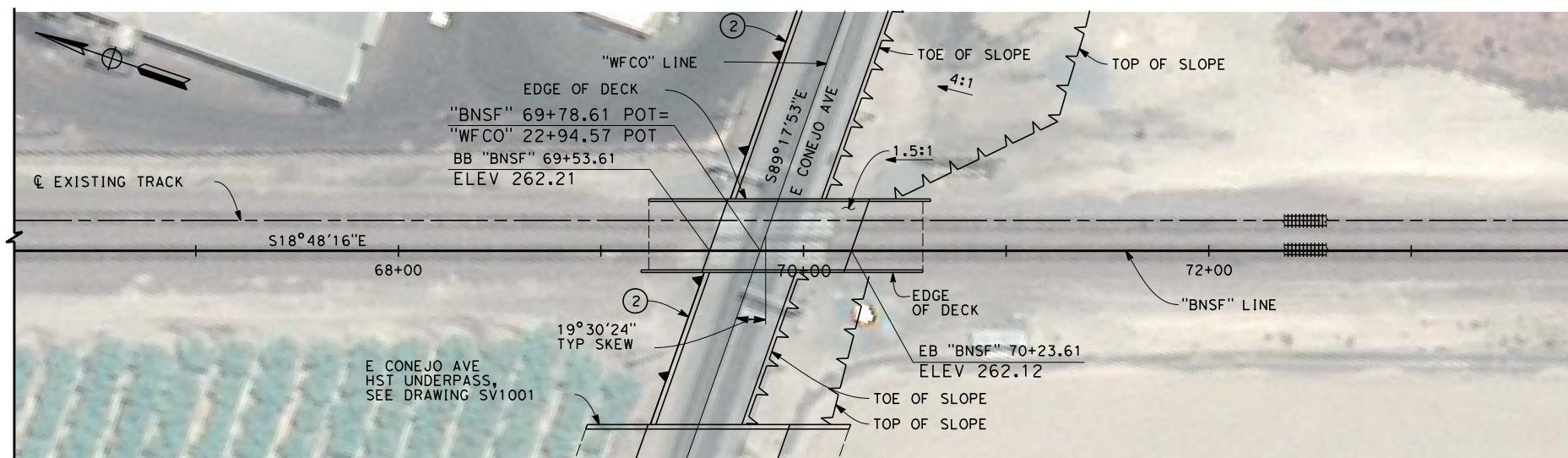


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
E CONEJO AVE BNSF UNDERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1002  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



**ELEVATION**  
SCALE: 1"=40'



**PLAN**  
SCALE: 1"=40'

REV	DATE	BY	CHK	APP	DESCRIPTION
					12/31/13

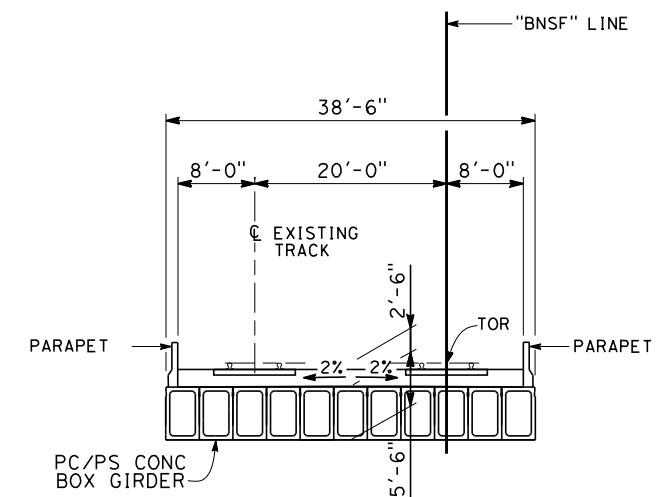
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
E CONEJO AVE BNSF UNDERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1003  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 2



- NOTES:
1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
  2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.

LEGEND:

- (1) STRUCTURE APPROACH SLAB
- (2) RETAINING WALLS
- [Railroad track symbol] INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK

40 0 40 80 10 0 10 20  
1"=40' 1"=10'



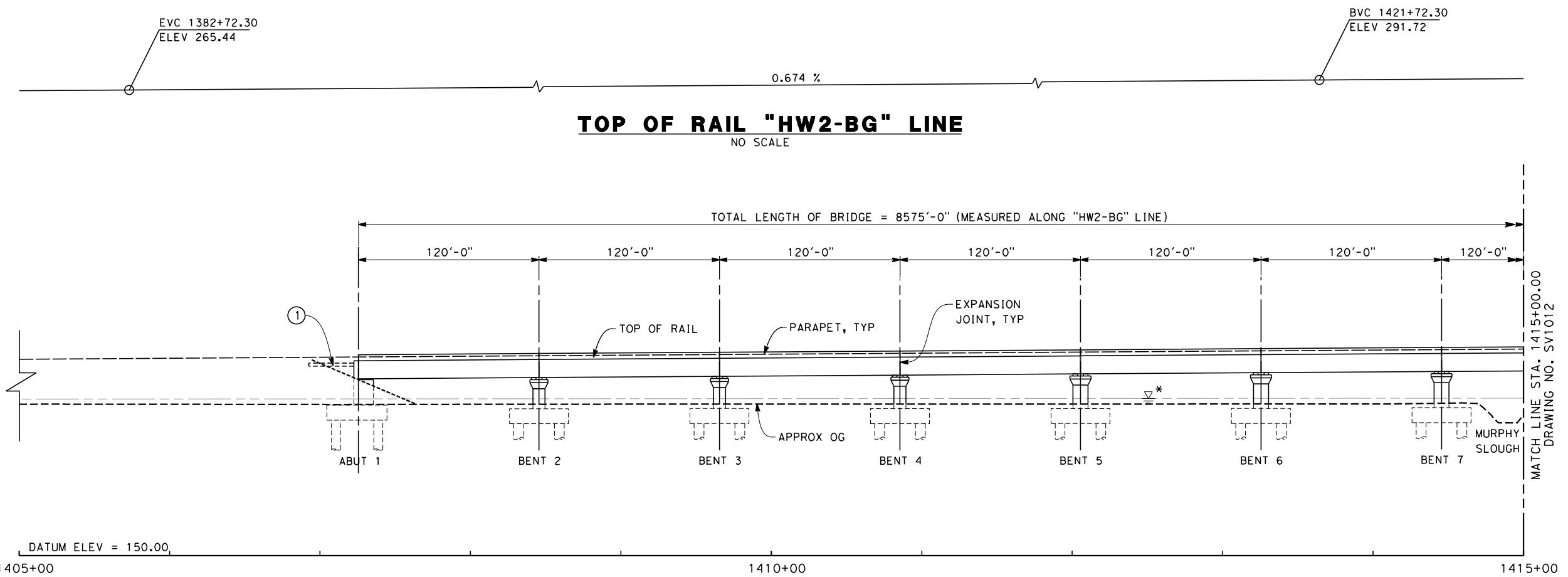
**RECORD SET 15%**  
**DESIGN SUBMISSION**  
-  
**NOT FOR  
CONSTRUCTION**



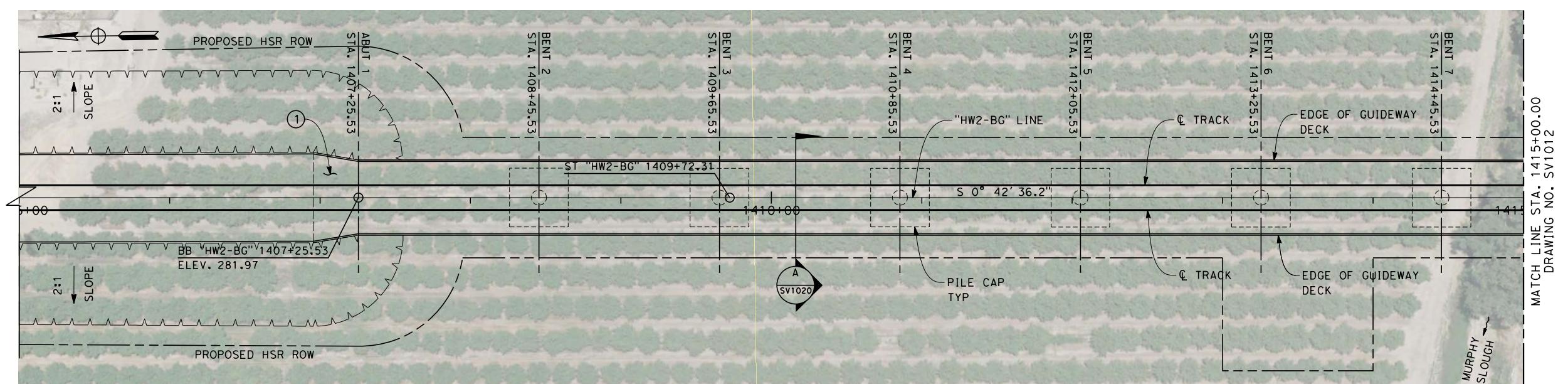
# **CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD**

HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1010  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 11



TES  
NOT ALL PILES SHOWN  
  
PILE LENGTH TO BE  
DETERMINED  
  
SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FPLM  
CONTINUOUS SPANS - BCC - PRECAST  
IN-SITU  
STEEL TRUSS - INSITU, SLID  
OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND  
INSITU SLAB  
  
UTILITY LOCATIONS TO BE  
DETERMINED  
  
ACCESS STAIRWAYS ARE  
PROVIDED AT SYSTEMS SITES  
(APPROX. 2.5 MILE INTERVALS).  
LADDER ACCESS TO VIADUCTS IS  
PROVIDED AT 2500 FT INTERVALS  
WITH ACCESS ROAD AND TURNING  
CIRCLE WHERE NECESSARY.



- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



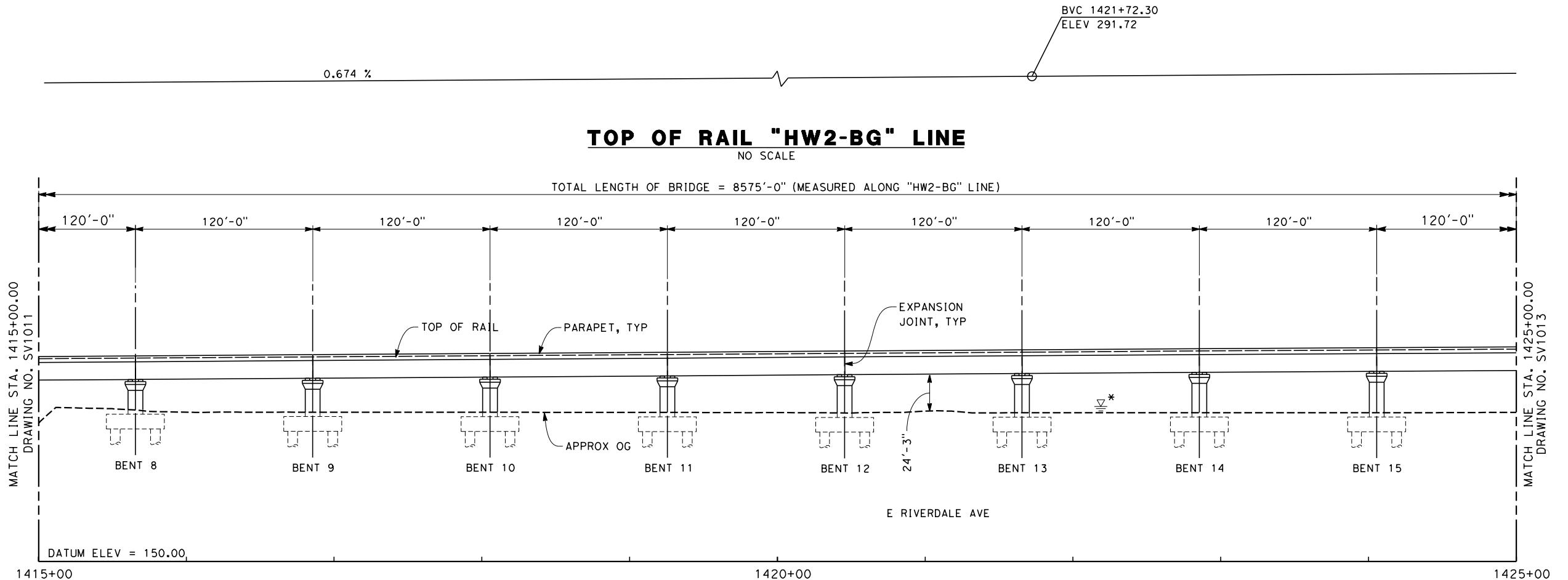
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**

HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
PLAN AND PROFILE

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1011  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 11

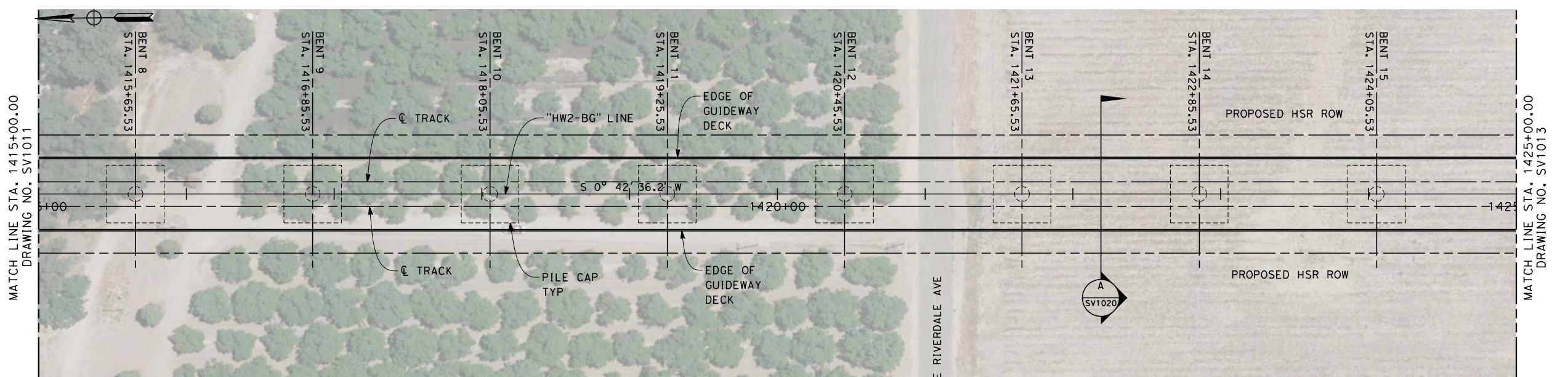
NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPML  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



## ELEVATION

SCALE 1" = 40



## **PLAN**

SCALE 1" = 40

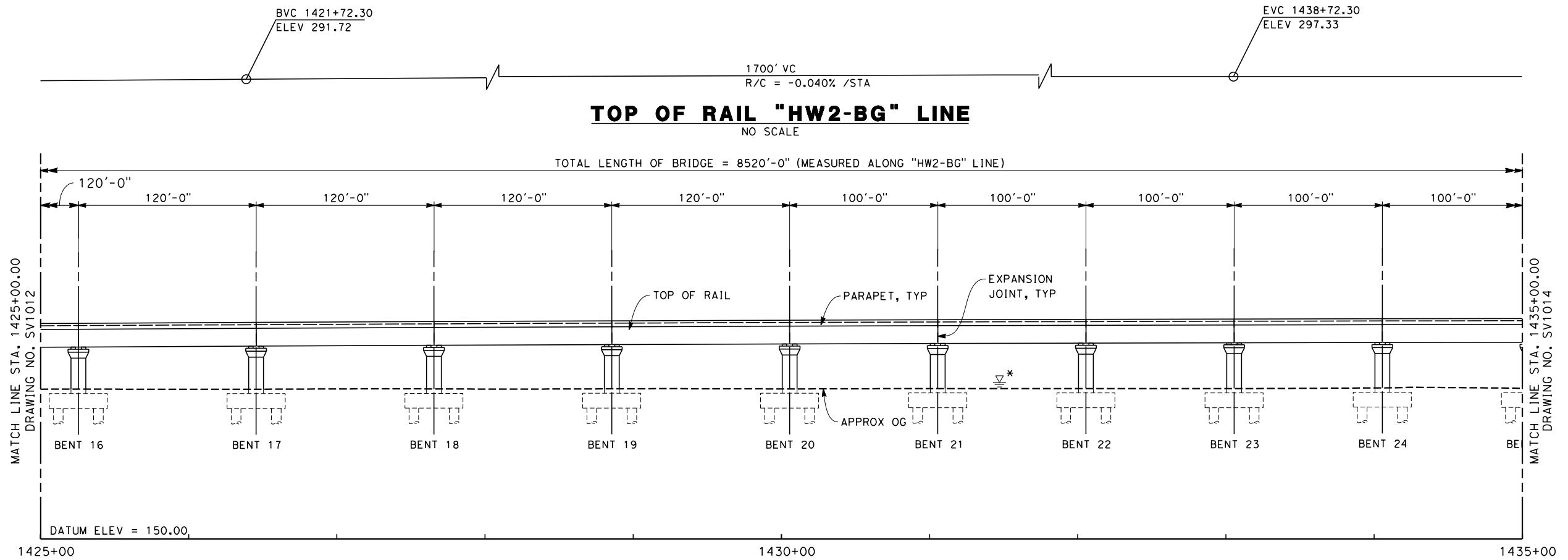


CALIFORNIA HIGH-SPEED TRAIN PROJECT

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
PLAN AND PROFILE

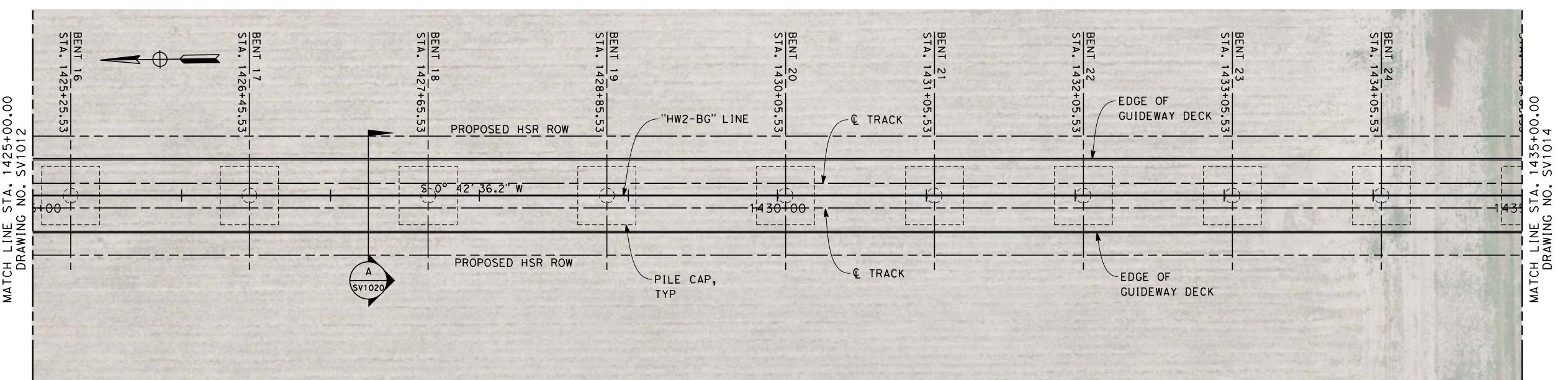
LRS | HMM | ARUP  
CALIFORNIA HIGH-SPEED

CONTRACT NO.	HSR 06-0003
DRAWING NO.	SV1012
SCALE	AS SHOWN
SHEET NO.	3 OF 11



NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPMS  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



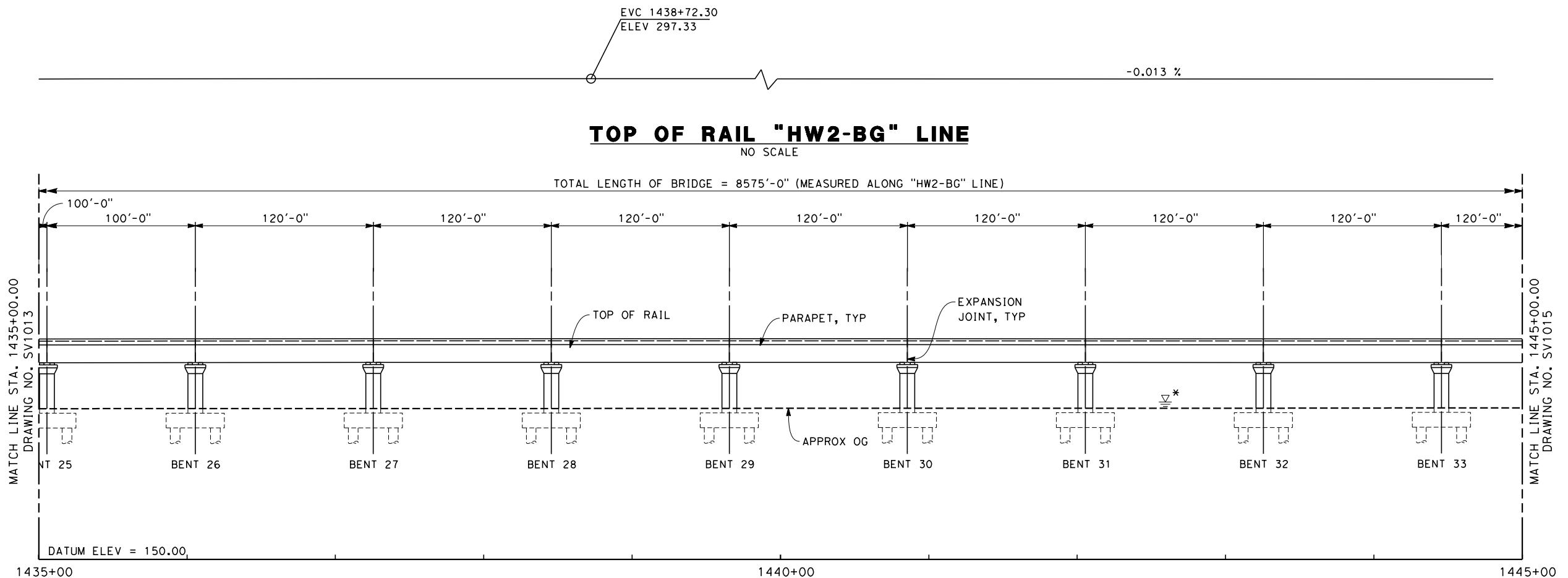
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**

HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
PLAN AND PROFILE

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1013  
SCALE  
AS SHOWN  
SHEET NO.  
4 OF 11

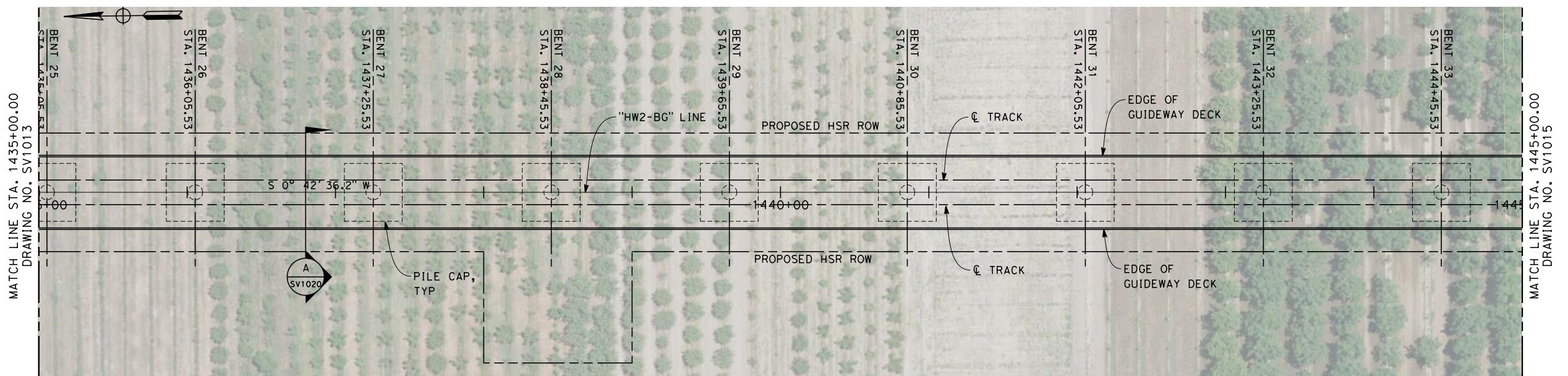
NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPML  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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## **ELEVATION**

SCALE 1" = 40'



## **PLAN**

SCALE 1" = 40



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**

HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
PLAN AND PROFILE

andrew.armstrong\2/12/2013 2:46:21 PM C:\pwworking\hmm\external\andrew.armstrong\arup.com\ams824\8XX-B-SV-1015-HW2.dgn

**TOP OF RAIL "HW2-BG" LINE**  
NO SCALE

TOTAL LENGTH OF BRIDGE = 8575'-0" (MEASURED ALONG "HW2-BG" LINE)

DRAWING NO. SV1014

DATUM ELEV = 150.00

EVC 1438+72.30  
ELEV 297.33

-0.013 %

120'-0" 120'-0" 120'-0" 120'-0" 120'-0" 120'-0" 120'-0" 100'-0" 100'-0"

120'-0"

TOP OF RAIL

PARAPET, TYP

24'-6" VERT CLR

MT WHITNEY AVE

APPROX OG

BENT 34 BENT 35 BENT 36 BENT 37 BENT 38 BENT 39 BENT 40 BENT 41 BENT 42

MATCH LINE STA. 1455+00.00  
DRAWING NO. SV1016

1445+00 1450+00 1455+00

OTES  
NOT ALL PILES SHOWN

PILE LENGTH TO BE  
DETERMINED

SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST  
IN-SITU

STEEL TRUSS - INSITU, SLID  
OR LAUNCHED

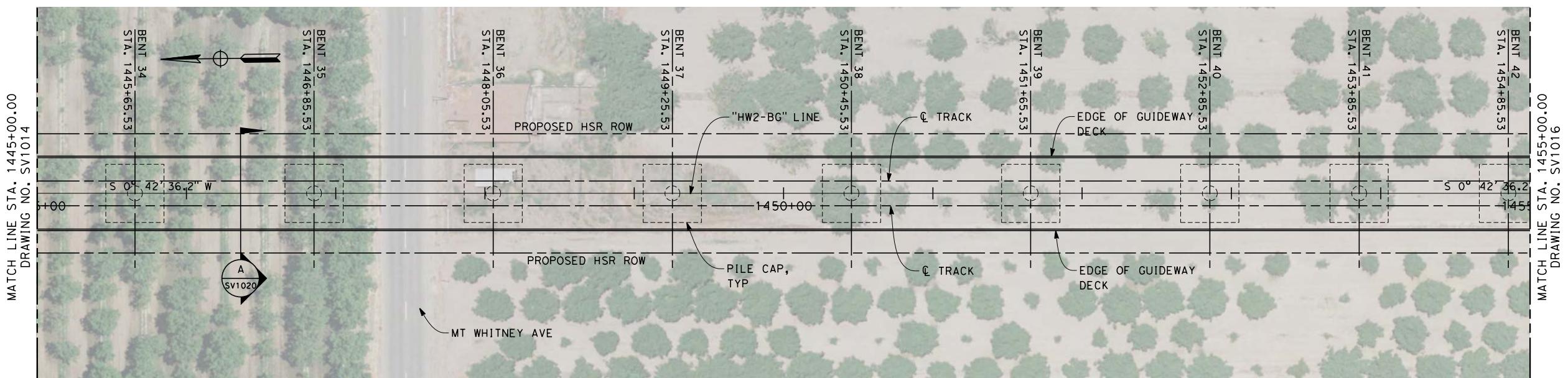
ELEVATED SLABS - PC BEAM AND  
INSITU SLAB

UTILITY LOCATIONS TO BE  
DETERMINED

ACCESS STAIRWAYS ARE  
PROVIDED AT SYSTEMS SITES  
(APPROX. 2.5 MILE INTERVALS).  
LADDER ACCESS TO VIADUCTS IS  
PROVIDED AT 2500 FT INTERVALS  
WITH ACCESS ROAD AND TURNING  
CIRCLE WHERE NECESSARY.

## ELEVATION

SCALE 1" = 40



**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

PLAN

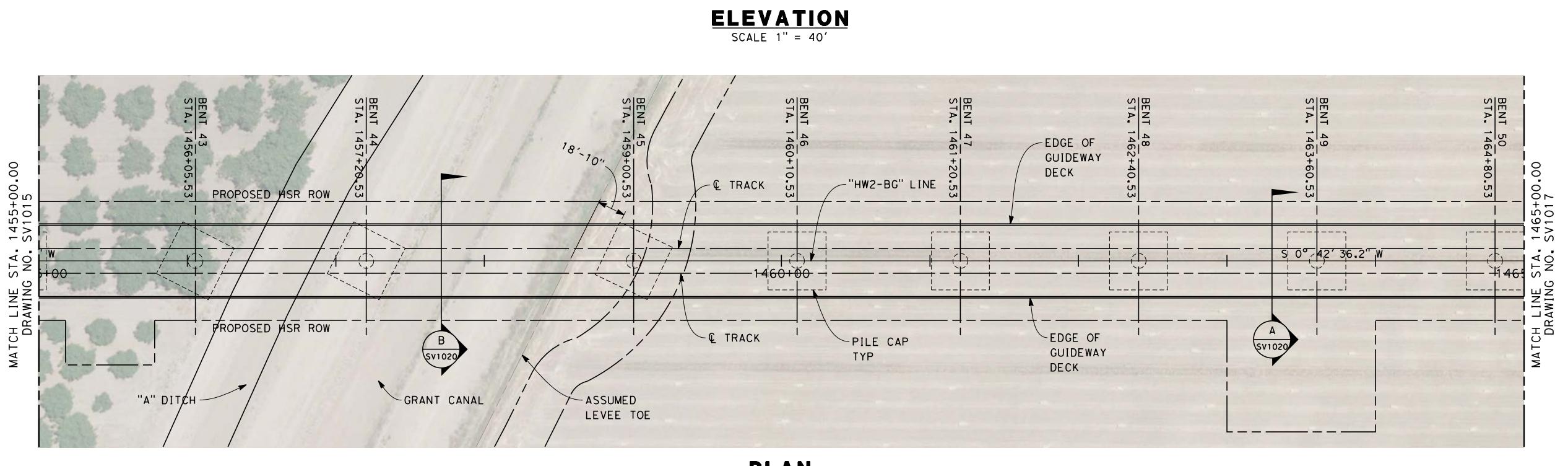
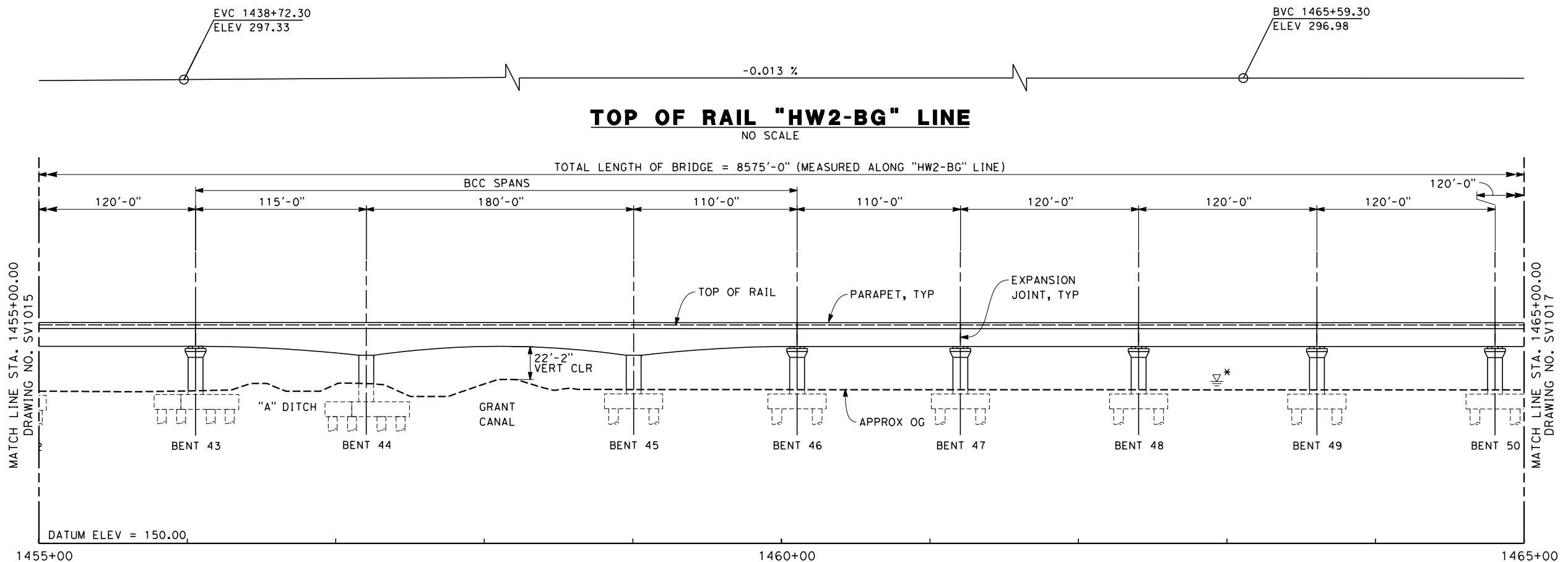
SCALE 1" = 40'

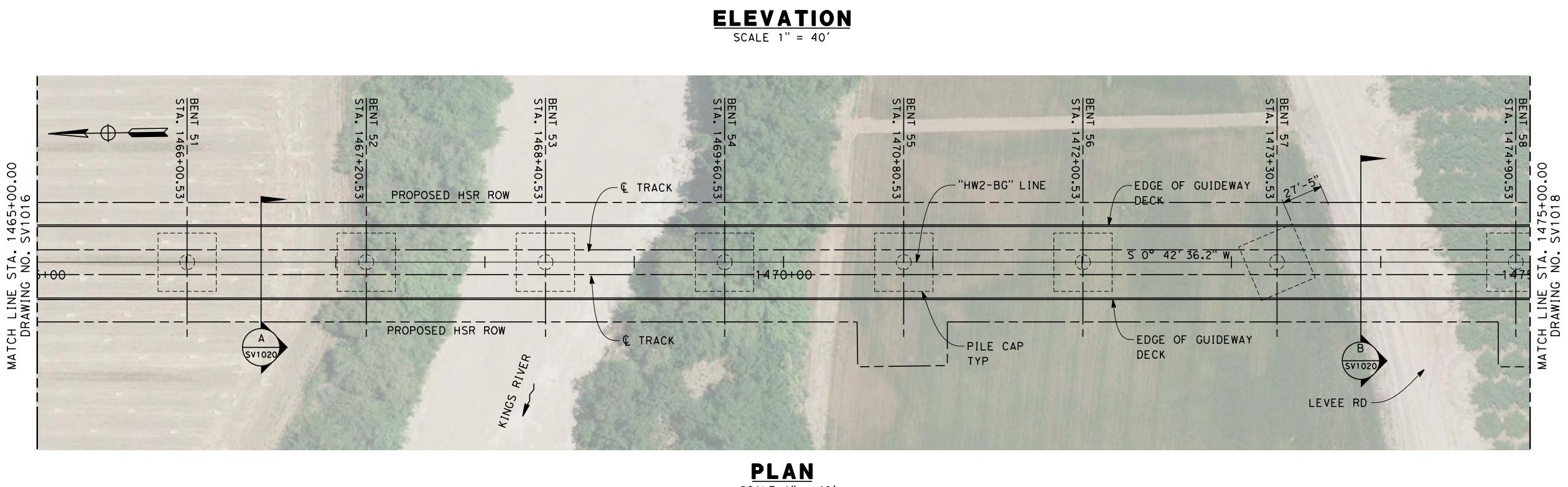
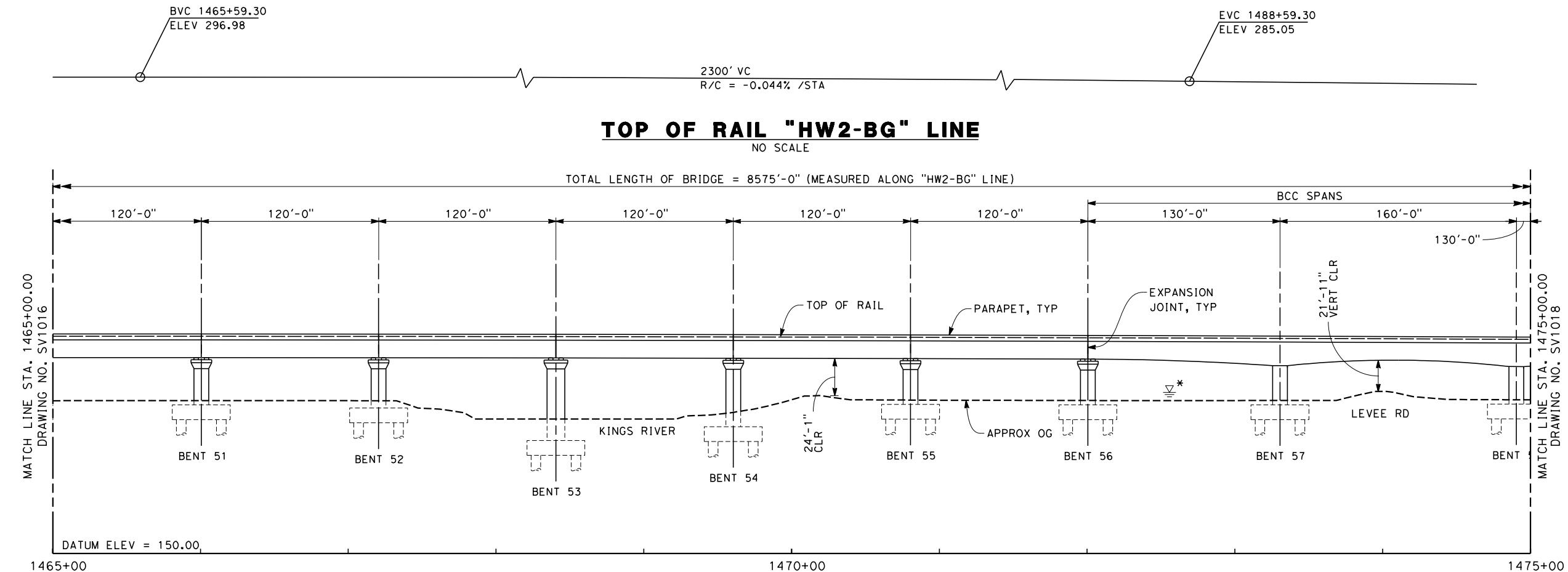


## **CALIFORNIA HIGH-SPEED TRAIN PROJECT**

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
PLAN AND PROFILE

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.





PLAN  
SCALE 1" = 40'

40 0 40 80

1"=40'

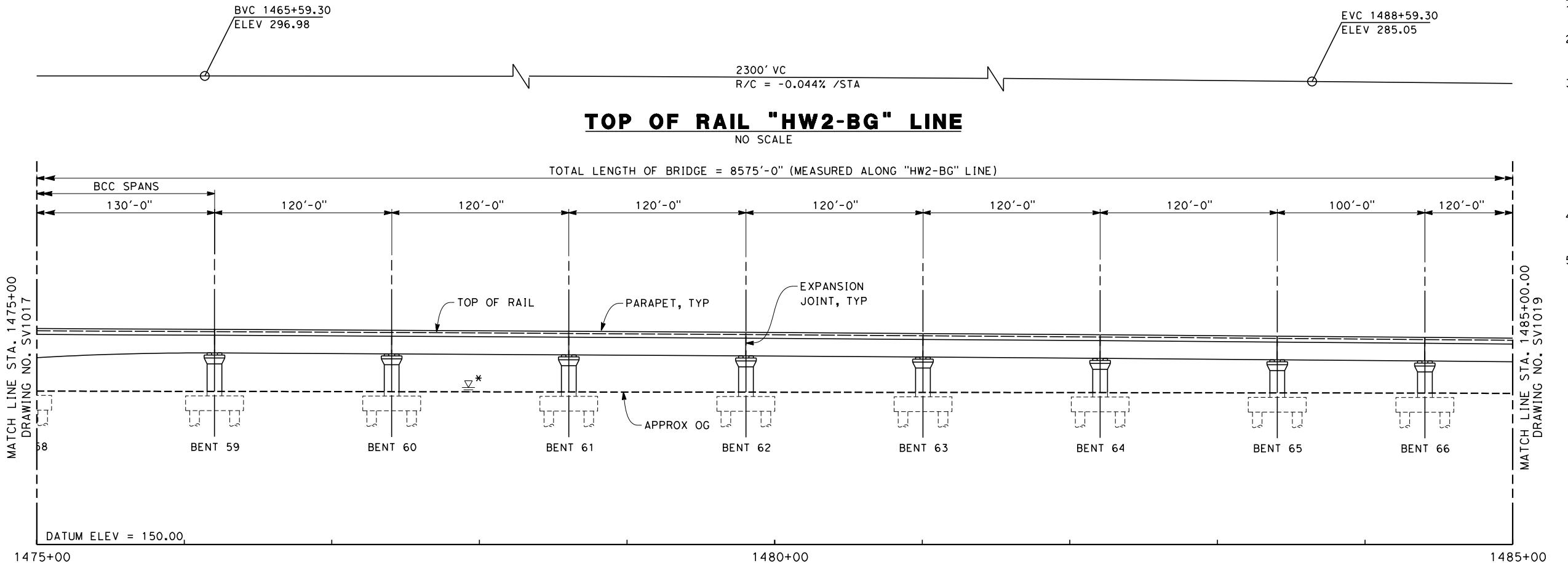
DESIGNED BY  
M. FISHER  
DRAWN BY  
N. HUTTON  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION

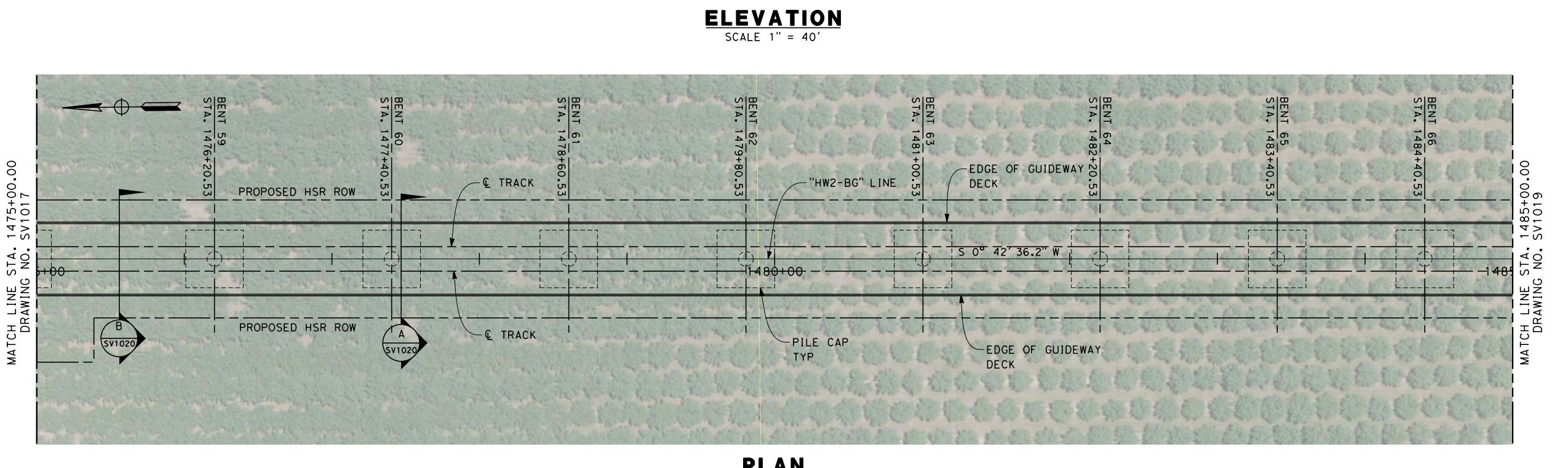
URS | HMM | ARUP

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
PLAN AND PROFILE

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1017  
SCALE  
AS SHOWN  
SHEET NO.  
8 OF 11



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLP  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

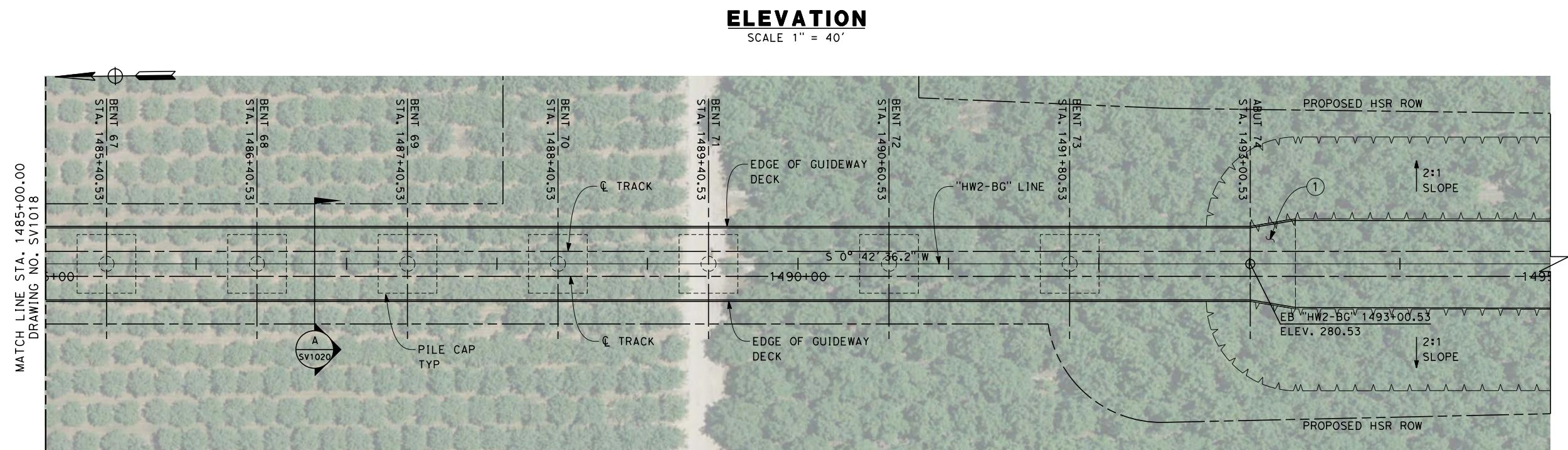
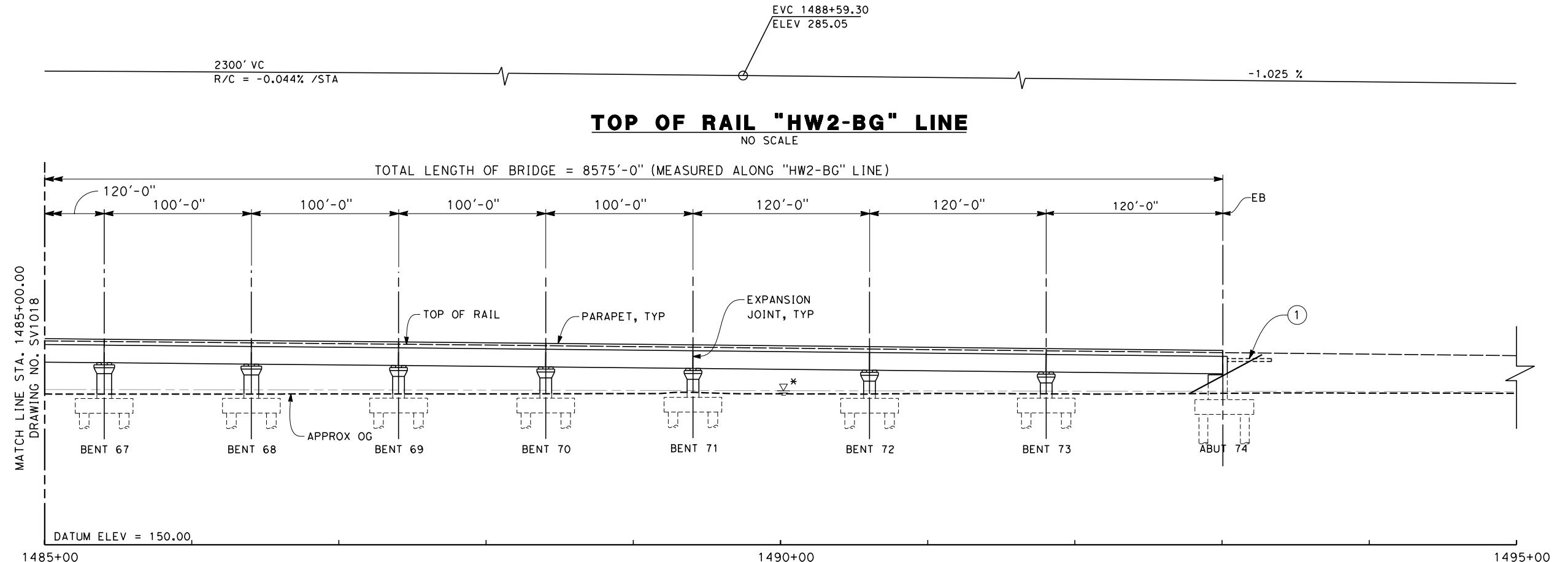


- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP	CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD	CONTRACT NO. HSR 06-0003
DRAWN BY N. HUTTON	-		HANFORD WEST BYPASS SUBSECTION	DRAWING NO. SV1018
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION		ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED	SCALE
IN CHARGE R. COFFIN		CALIFORNIA HIGH-SPEED RAIL AUTHORITY	KINGS RIVER VIADUCT	AS SHOWN
DATE 12/31/13	DESCRIPTION		PLAN AND PROFILE	SHEET NO. 9 OF 11
REV	DATE	BY	CHK	APP

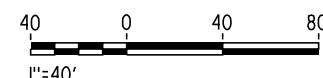
NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON SIMPLE SPANS - MSS OR FLPML  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



LEGEND:

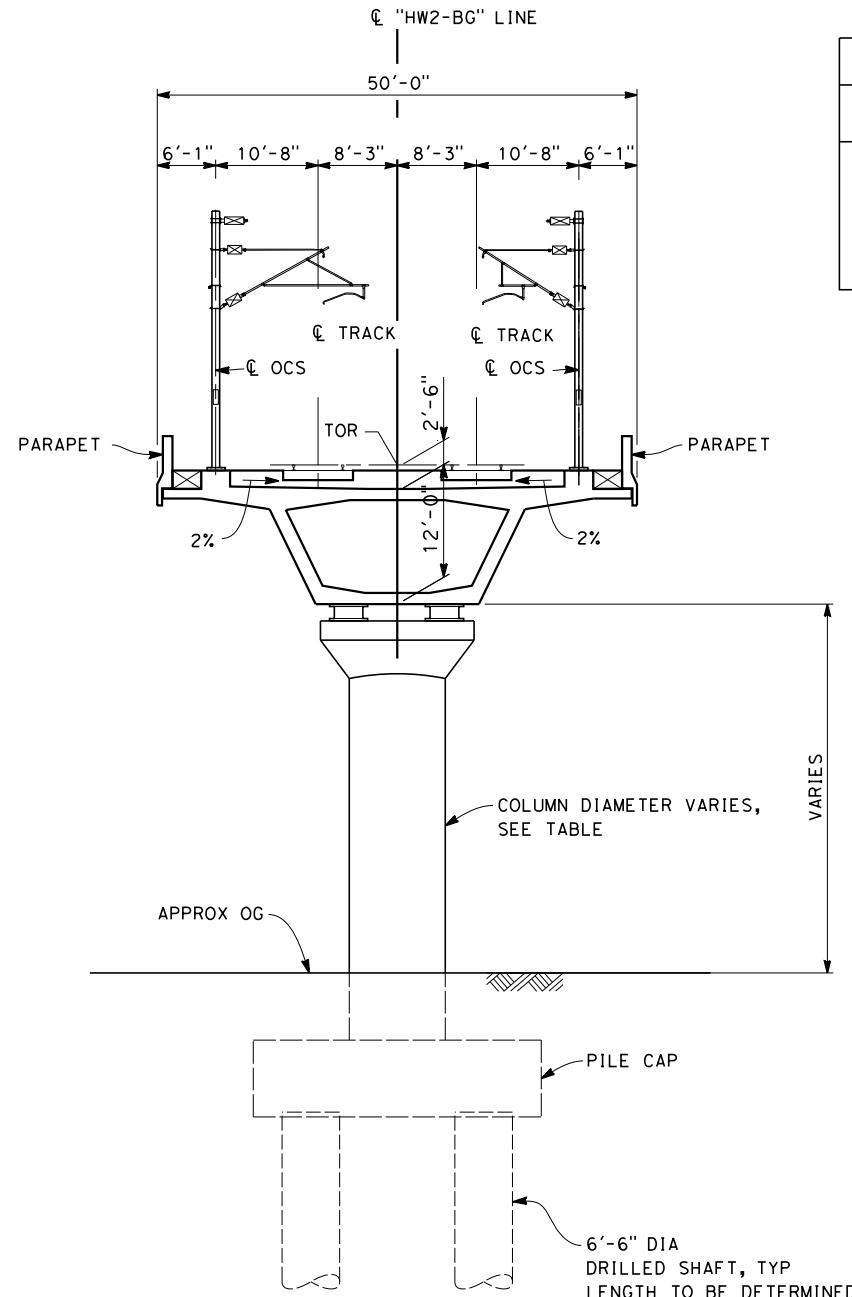
- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**

HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
PLAN AND PROFILE

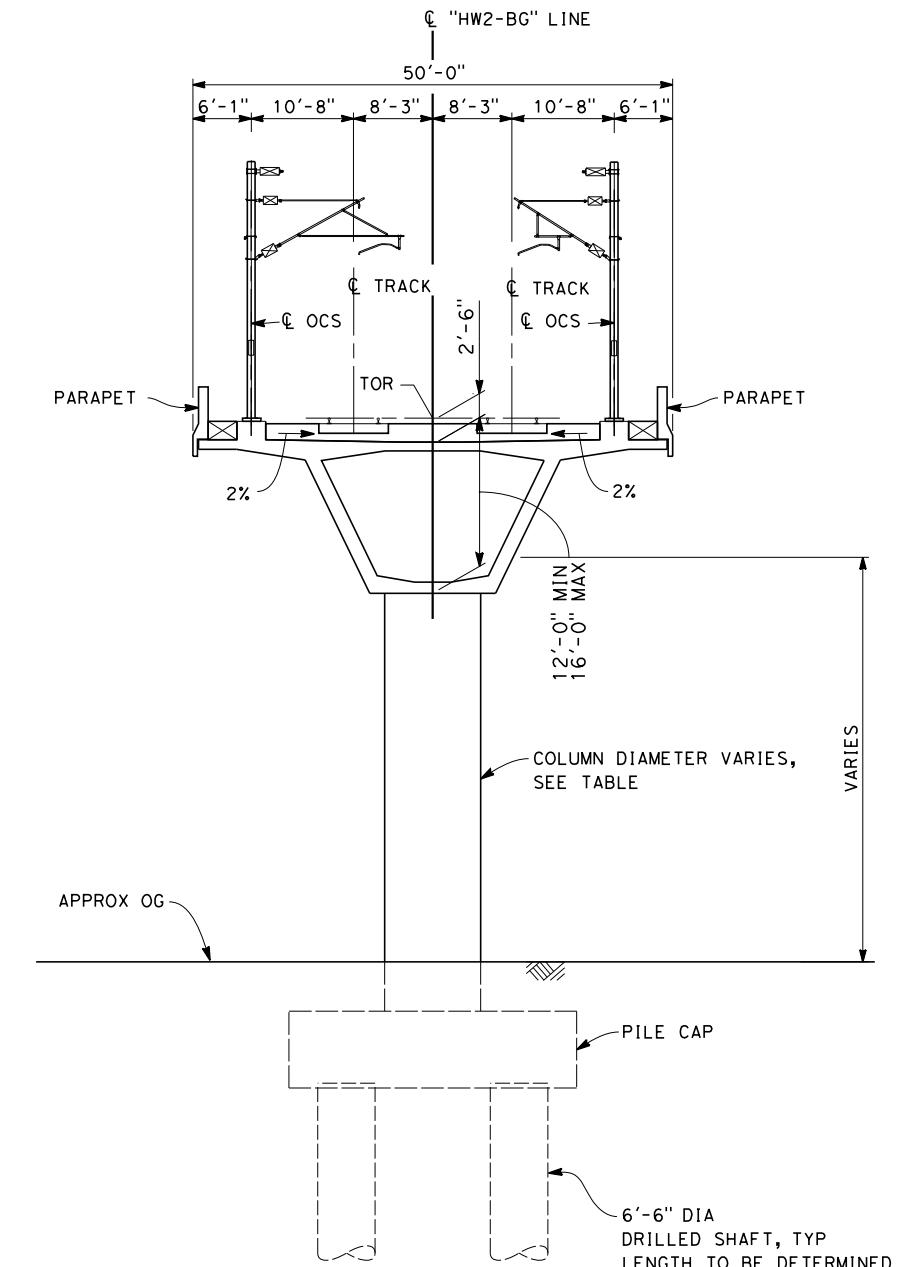
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1019  
SCALE  
AS SHOWN  
SHEET NO.  
10 OF 11



### SECTION A

SCALE: 1" = 10'

STA 1407+26 THROUGH 1456+06  
STA 1460+11 THROUGH 1472+01  
STA 1476+21 THROUGH 1493+01



### SECTION B

SCALE: 1" = 10'

STA 1456+06 THROUGH 1460+11  
STA 1472+01 THROUGH 1476+21



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY N. HUTTON	-	CALIFORNIA HIGH-SPEED TRAIN
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
KINGS RIVER VIADUCT  
TYPICAL SECTIONS

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1020  
SCALE  
AS SHOWN  
SHEET NO.  
11 OF 11



REV	DATE	BY	CHK	APP	DESCRIPTION	12/31/13
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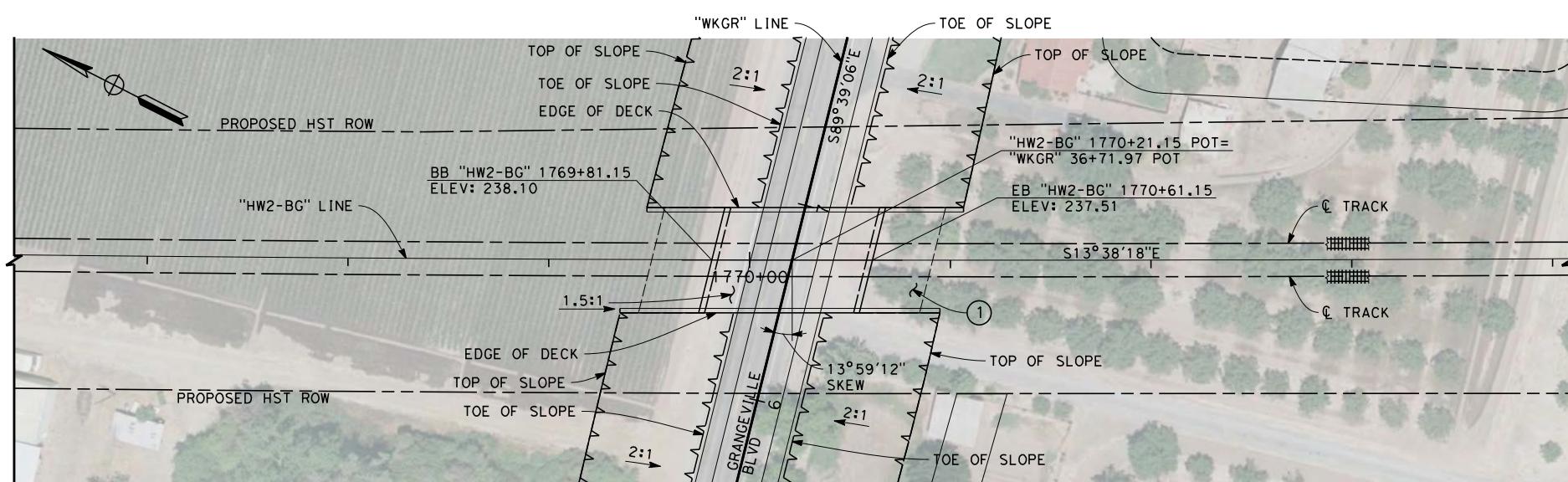
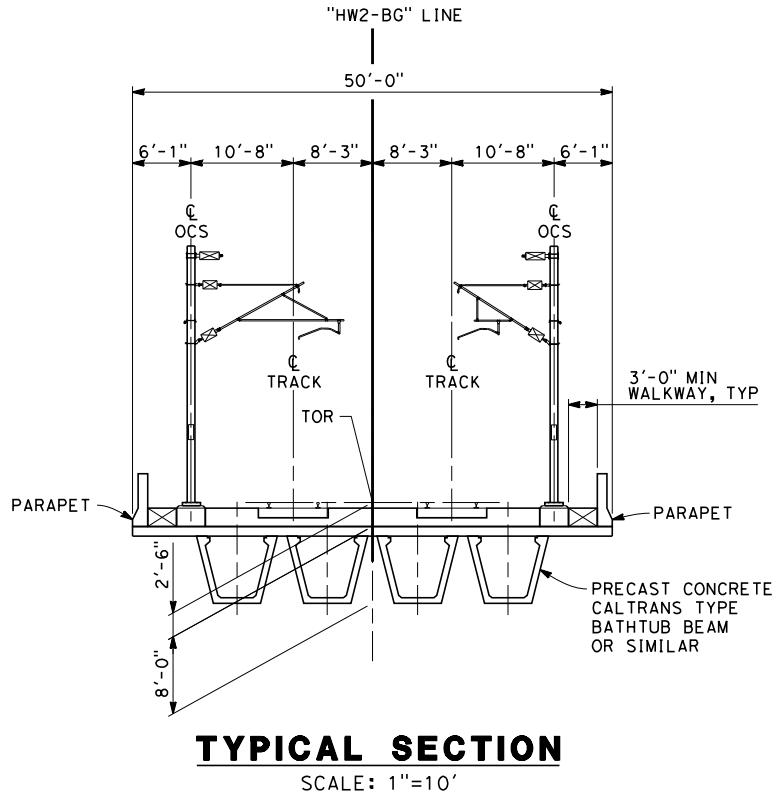
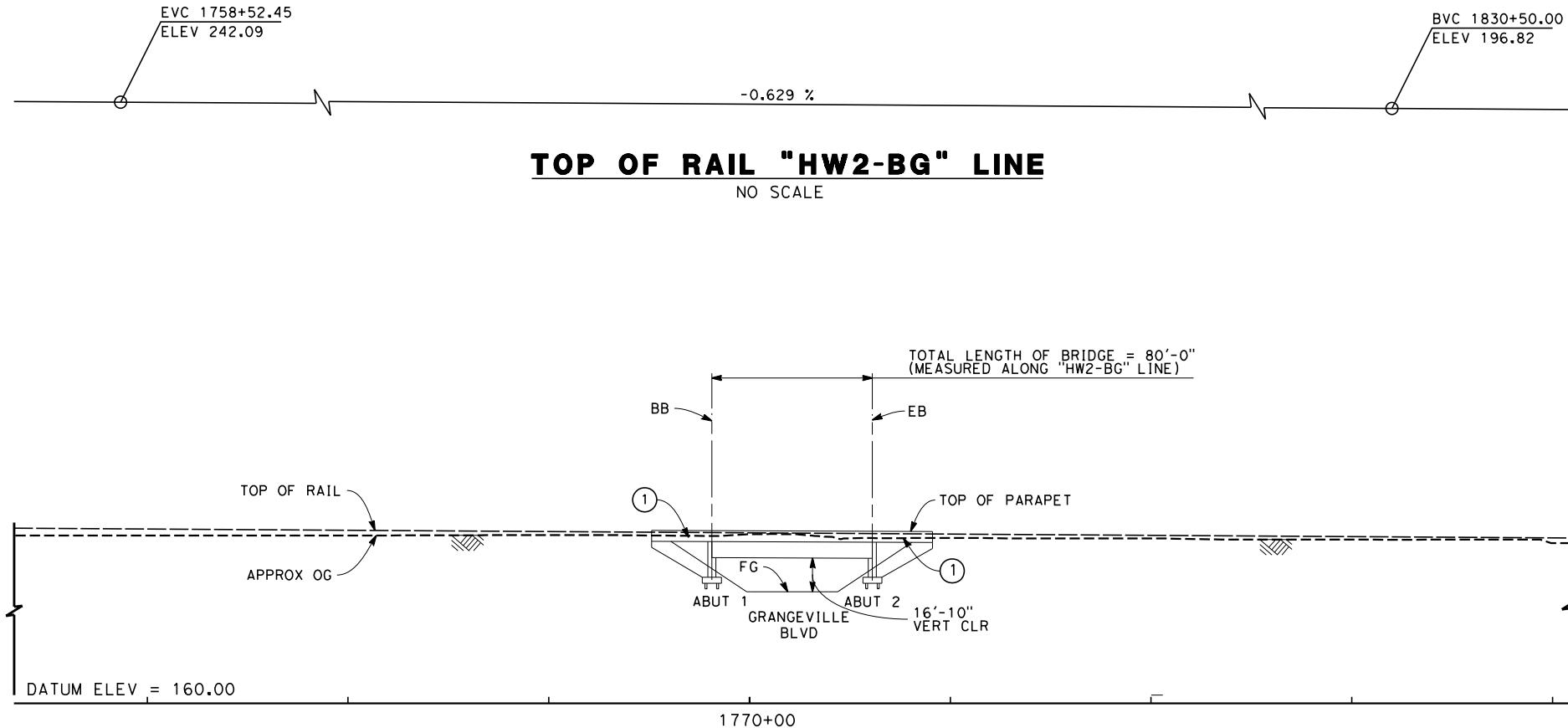
DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE

RECORD SET 15%  
DESIGN SUBMISSION  
-  
NOT FOR  
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
GRANGEVILLE BLVD UNDERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2027  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



NOTES:

1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.

LEGEND:  
① STRUCTURE APPROACH SLAB

The figure consists of two horizontal bars. The left bar starts at 40 and ends at 80, with tick marks at 40, 0, 40, and 80. Below it is the label "1'=40'". The right bar starts at 10 and ends at 20, with tick marks at 10, 0, 10, and 20. Below it is the label "1'=10'".



CALIFORNIA HIGH-SPEED TRAIN PROJECT

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
GRANGEVILLE BLVD UNDERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2028  
SCALE  
AS SHOWN  
HEET NO.  
2 OF 2



DESIGNED BY M. FISHER	RECORD SET 15% DESIGN SUBMISSION	URS   HMM   ARUP
DRAWN BY F. PALERMO	-	CALIFORNIA HIGH-SPEED TRAIN
CHECKED BY A. ARMSTRONG	NOT FOR CONSTRUCTION	
IN CHARGE R. COFFIN		
DATE 12/31/13		

REV

DATE

BY

CHK

APP

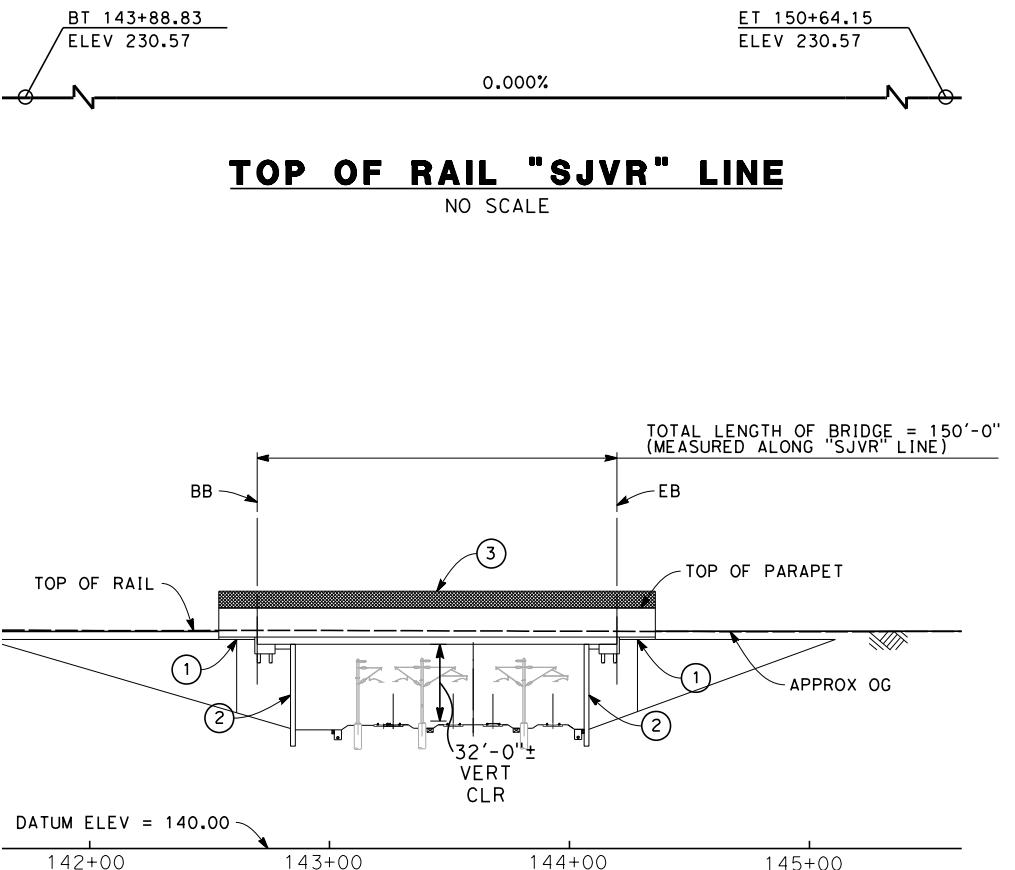
DESCRIPTION

12/31/13



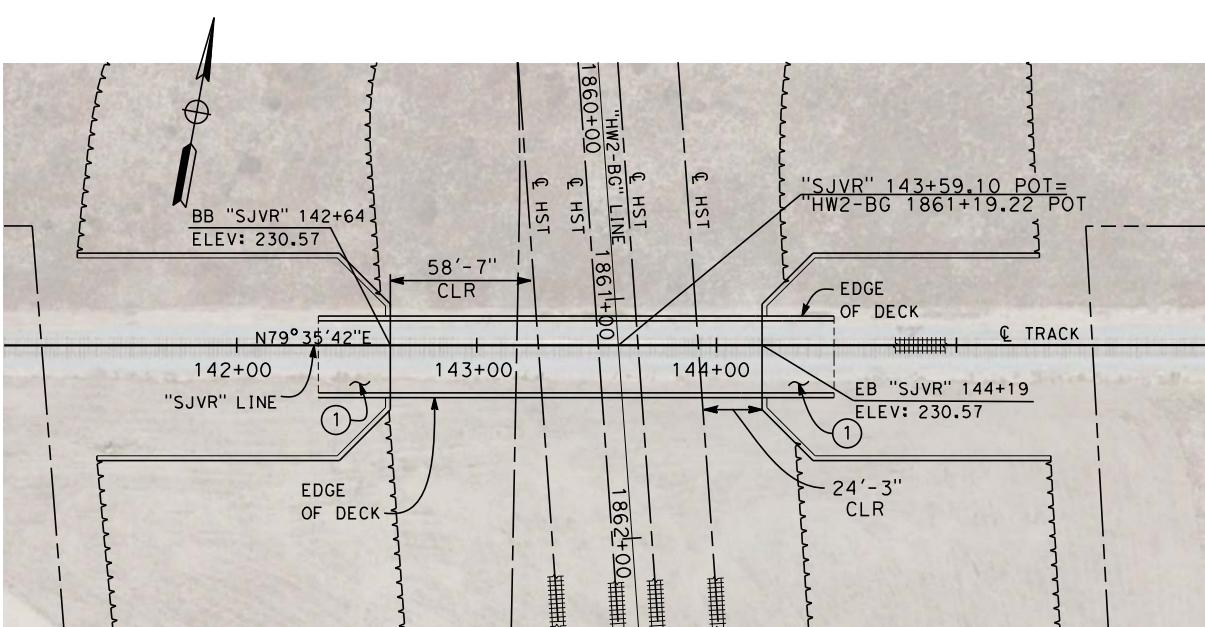
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
SJVR OVERPASS  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2050  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



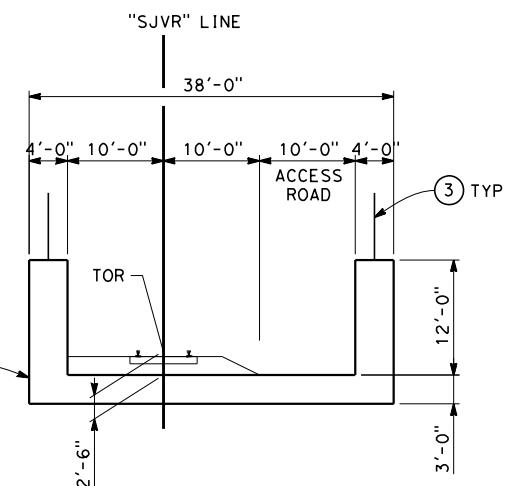
## **ELEVATION**

SCALE: 1"=40'



## **PLAN**

SCALE: 1"=40'



## **TYPICAL SECTION**

SCALE: 1"=10'

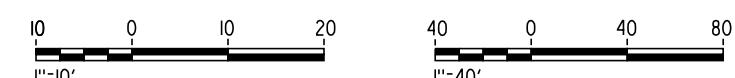
## NOTES:

1. PILE LENGTH TO BE DETERMINED/NOT ALL PILES SHOWN.
  2. FOR MINIMUM VERTICAL CLEARANCES, SEE ALIGNMENT DRAWINGS.
  3. THE SJVR CROSSING OF THE HST SHALL INCLUDE PHYSICAL MEASURES SUCH AS CONTAINMENT PARAPETS, BARRIERS, AND/OR PHYSICAL DERAILMENT PROTECTION TO MITIGATE THE POTENTIAL FOR ERRANT VEHICLES AND/OR CARGO ON OR APPROACHING THE OVERHEAD FACILITY FROM INTRUDING INTO THE HST FACILITY AND ITS OPERATING SPACE. DESIGN OF THE PHYSICAL MEASURES SHALL BE SUBSTANTIATED BY A SITE-SPECIFIC PRELIMINARY HAZARD ANALYSIS (PHA) AND A THREAT AND VULNERABILITY ASSESSMENT (TVA).

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - ③ AR FENCE (WITH SOLID METAL PLATE OVER HST)

 INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK



## **CALIFORNIA HIGH-SPEED TRAIN PROJECT**

**FRESNO TO BAKERSFIELD**  
HANFORD WEST BYPASS SUBSECTION  
ALIGNMENT HW2 (BELOW-GRADE) - MODIFIED  
SJVR OVERPASS  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2051  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 2